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Post-Fordist Innovation in Chilean Firms and Workers' Experience

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Post-Fordist Innovation in Chilean Firms and Workers' Experience

by

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Post-Fordist Innovation in Chilean Firms and Workers' Experience

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This research studies organizational change occurred in Chilean firms during the years 1998 – 2002. Its main purposes are (1) to discern the kind of organizational configuration that is being shaped, attending specially to the incorporation of post-Fordist innovations, (2) to analyze workers' experience facing those changes.

Specifically, the research was referred to medium and large firms, in the manufacturing and services sectors, located in the Metropolitan Region. The study was empirically founded on the in-depth study of 32 firms, considering the perspectives from managers and workers. The information was gathered using in depth interviews to 45 upper level managers and 24 workers, a survey administered to 673 workers, 8 focus groups with workers, and reviewing secondary sources.

The analysis of organizational transformations was grounded on an approach to the post-Fordist paradigm, in which nine key dimensions were identified: strategic adaptability, flexibility, skilling and full use of human capabilities, organizational reflexivity, inter-firm networking, use of ICT, work intensification and extension, employment lightening, and union weakness.

The research found the development of a new organizational configuration of the firms, with features clearly departing from those of the period of Import Substitution Industrialization, which is the Chilean equivalent to the Fordist period. Some of the new firm's elements are: strategic malleability, global perspective, internationalization, introduction of diverse forms of flexibility, structuring of inter-firms networks and the growing use of ICT.

The adoption of post-Fordism in Chilean companies have been strongly conditioned by institutional, economic and cultural factors of this society; particularly by the previous period of dictatorship and the increase in social inequality. Consequently, the resulting configuration has several peculiarities: weakness of vendor and subcontracting networks, high relevance of networks based on ownership linkages, reflexivity concentrated only on the upper levels of the organization, lack of communicative rationalization, weakness of collaborative relations, prevalence of distrust and social distance between managers and workers, and a cultural climate of inequity inside firms.

Therefore, the configuration that has emerged is markedly misbalanced: the dimensions showing fewer advances involve a low substantive incorporation of workers' experiences, learning development, and knowledge management.

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INTRODUCTION

Since the decade of the 1980s, an array of models and interpretations on the transformation of firms has emerged, asserting the constitution of a new type of company, i.e., new organizational configurations that represent a rupture with the forms of the past.

As usual, many positions have been extreme, often generalizing from particular tendencies, e.g., computerization of the factory, the formation of industrial districts, company networks, structural lightening, workers' reskilling, etc. Naturally, these generalizations have been the subject of much debate and, as natural consequence, skeptical authors have made the assertion that these changes are merely cosmetic, and that firms, fundamentally, continue functioning within the old logic - Fordist or Taylorist - albeit in a new guise

However, if we cast this debate in a wider frame and review the great range of research carried out, we find that it is undeniable that significant transformations have occurred during the last three decades in the firms and their environments. Inside firms, a great quantity of innovations have been developed - in management, in the design of strategies for coping with the new socioeconomic conditions, in reorganizing work and the processes of the firm. Among companies, certain kinds of networks and forms of coordination (strategic alliances, global production chains, franchises, etc.) have acquired particular relevance, reshaping the conditions of economic competition. Those organizational efforts have been associated with very substantial changes in the political and economic environment (the retreat of the welfare state and the apogee of Neoliberalism with its institutional manifestations); in the technological environment (the enormous advance of information and communication technologies); and in the cultural environment (the growing increase of consumption as source of meaning and the life esthetization).

Companies' reactions to such new conditions have supported a **co-evolutionary development**[1] in which the firms' adaptive actions have reinforced and consolidated the environmental changes, some of which results are a sharp competitive escalation and the acceleration of innovative processes. This mutual and complex reinforcement invigorates the general pace of change, in companies and societies, shaping particular trends. In such a way, when we review the results of empirical investigations, it is possible to distinguish, in spite of many differences, certain kinds or organizational changes surfacing across societies.

Nevertheless this process by no means affirms the generalization of a similar pattern emerging throughout the world. There is a set of basic organizational elements that have become the object of attention and transformation, but the specific form of the results, and the global arrangement of the set of elements varies from society to society, and from company to company. Faced with this wave of organizational transformations – as in previous periods was the bureaucratization of firms, or Taylorism - one cannot expect that all companies will adopt the same changes in a uniform way or in similar depth. No firm or public service, in Weber's time, had bureaucratized itself from top to bottom; no firm, after the entrepreneurial community had broadly accepted Taylor's ideas, had completely Taylorized its production processes. Taylorism, Bureaucracy, Fordism, Postfordism - it is necessary to remember - are **ideal types**. They are scientific fictions, based upon empirical evidence, intending to apprehend the central traits of a particular social phenomenon, and recreate, in an abstract way, its dynamics and articulation. To discern this internal articulation and the

[1] Burgelman (2002), analyzing the strategy of Intel Corporation, shows the co-evolutionary process developed by this firm with its market segment. Trying to adapt itself to the competitive conditions, in the period 1987-1998, Intel with its strategical decisions shaped that particular industrial sector, creating a positive feedback loop, requiring Intel to make more and more investments to maintain its strategy. We can discern a similar co-evolutionary logic in the actions of populations of firms.

historical process in which it takes form is, precisely, the aim of ideal typification.

So, we can make the following general introductory statement: in a very abstract and idealized way, we can discern a new organizational pattern, resulting from the recent historical transformation of societies. This new configuration is being consolidated in advanced capitalist countries, but also it is extending throughout the world, assuming particular forms in each society. Although the name of such a configuration is part of the debate, and it is not a trivial matter, here we have opted for the name that we find most inclusive and that, for the time being, better connotes the new organizational era: "**post-Fordism**". Its direct predecessor, the concept of "Fordism", such as it is understood currently, has the virtue of evoking and apprehending several core features of the previous period, which extends, approximately, from the 1920s to the 1970s, but whose roots can be traced back to the last decades of the ninetheenth century, even before Ford's innovations.[2]

The main conception evoked by the **Fordist** label is a standardized and massive production that allows obtaining economies of scale and growing earnings that could be reverted in increasing wages. This kind of production is expressed especially in hierarchical, centralized and formalized ("bureaucratized") organizations. These internal characteristics are coupled with a State intervening actively on the economic system, stimulating demand and assuring social welfare; with strong unions able to negotiate with employers and the State; and, on the other hand, with barely diversified consumption patterns (Boyer & Durand, 1997; Allen, 1996.a)

[2] This same tipification -Fordism-, now broadly accepted, was only constituted in the 1970s, for authors of the Regulation School, like Aglietta, although the term have been used before, with more specific meanings (Allen, 1996.a).

Postfordism involves a new orientation in all these aspects - in the internal organization and in the coupling with the environment -, just as we will specify in what follows.

Our research intends to examine these changes **in Chile**, a country which has been advanced, in the Latin American context, in making economic and institutional changes. Its economic results have been conspicuous; for instance, in the 1991-2001 period, the country shows the biggest growth in the GDP in the region.[3] At the same time, however, it has experienced a long interlude of dictatorship and political repression.

During the military régime (1973-1989), changes inside firms were strongly influenced by the authoritarian context. Subsequently, during this time, entrepreneurs and managers rationalized the use of equipment and human resources in a drastic way. This implied, between 1974-1982, a severe employment reduction, and, especially after the 1982 economic crisis, an extensive use of manpower, an increase in outsourcing and subcontracting, and the cutback of salaries (Agacino and Rivas, 1995; Abramo, Montero and Reinecke, 1997; Montero, 1997; Mizala and Romaguera, 1994).

Simultaneously, an important managerial renovation occurred. Since the 1980s, and more pointedly since the 1990s, a significant "upgrading" of the managerial and technical layer took place, developing "management abilities", especially those which referred to global business administration, that is, those related to an improved coping and coupling with other companies and with the market (Abramo, Montero and Reinecke, 1997: 173).

[3] In that period, Chile GDP grew 6.7% and productivity, 5.4%; while the respective growth rates for all Latin American and Caribbean countries were 3.1% and 1.7% (ILO, 2002: 23). .

On the other hand, since since the military coup (1973), until the beginning of the 1990s, the management of human resources was noticeably neglected. This has continued to be a weak area, receiving very little investment and renewal.

In summary, before the 1990s, the “modernization” of firms had been very incomplete and partial, with the greatest emphasis on investing in hard technology – machinery and equipment - (Geller, 1994) and scant organizational innovation.

However, during the 1990s, several conditions that had marked the previous phase, began to change: the transition to democracy took place; workers got better legal protection; the price of manpower rose; union pressure increased; a wider commercial integration with the rest of the world was formalized, associated with the signature free-trade agreements. As a result, the "factors of easy competitiveness" – as Abramo, Montero and Reinecke (1997: 149) call them - have been exhausted, and pressure has intensified to increase productivity as the necessary means of companies’ adaptation.

Thus, our first objective is to inquire into how far have post-Fordist traits **extended** into Chilean firms. A second objective, associated with the previous one, is to discern the **particular forms** assumed by such post-Fordist features, if they are present, and identify which are the particular **articulations and configurations** that have been consolidated or that seem to be emerging, and embedded in the particular institutional and cultural settings of this society. A third objective is to investigate how these changes are **experienced by workers**. The latter has been one of the more controversial topics of international debate: how beneficent or harmful are such changes. Here, we will study this matter from the perspective and perceptions of the workers themselves, and we will seek to view the changes that are in progress from their unique perspectives.

Those are our three central objectives, but we will also try to advance, although only in an exploratory and tentative way, some results in reference to a fourth focus: the connections among organizational changes and characteristics or processes at a macro-level, i.e., the institutional, cultural and society-level. These connections could involve positive reinforcement, conditioning or obstruction, and could contribute to explaining organizational trends and results. This is not a direct subject matter of our study, and what we can obtain is much more preliminary and tentative, however, it is a very significant aspect of the changes being observed and, therefore, we will consider it.

Methods

We have covered such objectives through an empirical research referred specifically to medium and large firms, which are those that more quickly adopt changes and organizational innovations. On the other hand, in this country, many more studies have been carried out in manufacturing companies, in spite of the fact that the service sector concentrates most of the national employment and it is the sector with higher employment growth. So, we have made a point of including firms from manufacturing and service industrial sectors.

The research is empirically founded on an in-depth study of **32 firms**, considering the perspectives and collecting information from managers and workers. The information was gathered using in-depth interviews with **45 upper level managers** and **24 workers**, a survey administered to **673 workers**, **8 focus groups with workers**, and reviewing secondary sources

Order of the presentation

In Chapter I, we specify the fundamental dimensions composing the post-Fordist paradigm. These dimensions or elements will be our conceptual framework for examining organizational changes in the Chilean firms.

In the second chapter, we make a summary description of our research methods and report some main characteristics of the firms investigated. In a later chapter, about worker's experience, we will add more information regarding the sample of workers.

In the following three chapters we review the wide scope of organizational changes experienced by Chilean firms – regarding strategy, organizational structure, connection with work environment, relationships among firms, work organization, use of information technology and management of human resources. In each case, we try to detect the emergence of new practices or configurations, and make comparisons useful for determining the magnitude and relevance of such changes. In order to do this, we proceed from the most global level, concerning the whole organization, to what is directly referred to the work and activities of the members of the firm, and then to the individual experience. Thus, we consider three levels, which correspond to the following chapters.

In Chapter III we approach changes concerning the global reframing of the firm, which have pervasive consequences throughout the organization. These are the cases of changes in organizational strategy, structural redesigns and application of global programs of organizational change.

In Chapter IV we study changes modifying organizational borders and connecting firms, in new ways, with sectors of their environment. This will include the topics of outsourcing and subcontracting networks.

In Chapter V we approach changes directly related to the individuals working in the firm, affecting their daily work activities and their connection with the organization. We will see, specifically, changes occurring in work organization and management of human resources.

The focus of Chapter VI is the worker's experience in front of the transformation happening in the firms they work. Here we consider the characteristics of work in itself, the technical participation of workers for improving the organization, and the labor relations inside the company.

In the final chapter we summarize the main findings and conclusions of the research, and try to synthesize the resulting organizational configuration of Chilean firms, and the particular situation of workers in it.

CHAPTER I.
POST-FORDISM: THEORETICAL FRAMEWORK AND RESEARCH PROBLEM

1. The Post-Fordist Paradigm

During the 1970s, the economic crisis made evident the shortcomings of the prevailing Fordist model. The expression of this crisis took many forms - a global recession, the saturation of industrial markets, an increase in interest rates coupled with a decrease in investment rates, as well as high unemployment. As a result, based upon the correspondence between mass production and mass consumption, and supported by a institutional frameworks intended to ensure economic stability, the Fordist model was seriously weakened (Piore & Sabel, 1984; Lipietz, 1992).

In terms of labor process, **Fordism** (or Fordism-Taylorism) implies continuous production in high volumes, generating economies of scale; standardization of products and process designed by engineering departments; functionally specialized machinery; specialized workers, performing fragmented, limited and repetitive work, under strict hierarchical control; and, a concentration of semi-skilled workers in large factories. This kind of industrial production has been associated with the mass marketing of standardized products. The Regulation theoretical approach also has asserted the embeddedness of these production and consumption processes into an institutional mode of regulation, e.g., State management of the national economy through “Keynesian” policies, including social legislation and welfare, and the construction of an implicit social and political agreement, especially after the Second World War, called the "Fordist compromise" (Lipietz, 1992; Allen, 1996).[4]

[4] For the theory of regulation, the Fordist model is a "developmental model", including (1) a labor process, (2) a regime of accumulation (connecting wages and productivity, and mass

In light of increasing economic constraints and the decline of the Fordist model, innovations in work organization and production emerged. New aspects of the organizational processes were emphasized as the main factors influencing the productivity and success of the firms. These new organizational forms have received varied labels: "flexible specialization" (Piore & Sabel, 1984), "lean production" (Womack, Jones & Roos, 1990), "Toyotism" (Dohse, Jurgens & Malsch, 1985), "anthropocentric production systems" (Charles, 1995), “After Fordism” (Boyer & Durand, 1997), "flexible mass production" (Coriat, 1997), "diversified quality production" (Streeck, 1997), etc., and have been conceptualized in ways that draw attention to both the continuities as well as the discontinuities with Fordism/Taylorism, as well as both the positive and negative aspects of the emerging model. Indeed, the question remains whether these innovations are creating a new model opposed to, and even surpassing Fordism/Taylorism, or whether these changes are merely prolonging, via different procedures, the same old logics. In either case the fact that a wave of innovations is arising is undeniable. Furthermore, regardless of the differences in conceptualization, there are some shared **core characteristics** we can identify and which we can summarize in the following:

(a) Strategic adaptability. The firm is observed by its members from the strategic perspective of its adjustment to the socioeconomic and cultural environment. That perspective constitutes the framework for making a **global restructuring of the organizational process**, both internally and externally - in the connections with other organizations or elements of their environment (Prahalad y Hamel, 1990; Porter, 1985). Changes go beyond the immediate production process. "They are concerned with total concepts that regard

production and mass consumption), and (3) a mode of regulation, with an important role of the welfare state sustaining the stability of the demand (assuring, for instance, the consumption of the unemployed) (Lipietz, 1992). Our study is concentrated on the organizational and labor processes; the other aspects are only background.

the organization of work and the organization of the company as a unity. They are concerned with reconstruction not only in the production process but also in the broad spectrum of research and development, manufacturing within and outside the firm, production planning and organization, [and] ideas about distribution" (Schumann et al, 1995: 97, 98). In general terms, this involves the decline of the large, vertically integrated corporation and organizational model, and implies structural changes, reducing hierarchical levels, decentralizing, and establishing external links; looking for advantages in innovativeness, flexibility, and cost reduction.

(b) Flexibility. In contrast to the standardized production of the Fordist model, the post-Fordist models include various ways of increasing flexibility in the production process making it capable of responding to demand variations, and producing a wide array of products in response to different consumer demands (Hollingsworth & Boyer, 1997: 20), and developing **economies of scope**. These transformations are associated with a special attention to the product and service **quality**. On the other hand, flexibility is also referred to rapid and significant adjustments in production volumes.

(c) Skilling and full use of human capabilities. The flexibilization of organizational processes would be supported by a skilled workforce capable of shifting from one job to another within a firm. This skill enhancement and multi-skilling promotion is a reversal of the process of de-skilling, associated with the Taylorist component of the Fordist model (Charles, 1995; Coriat, 1992; etc.). This change is associated with a process of **decentralization** in the technical decisions and with the concession of increased **worker autonomy**.

Furthermore, these arrangements "represent the effort to make use of the **full potential of human labor**, of tacit skills, energy and motivation (...) to

enhance productivity and to retain and enhance a competitive position in the market" (Littek and Charles, 1995: 4). This involves a greater emphasis on **"humanware,"** i.e., on the role of human resources and organizational methods rather than on "hard" technology (Shimada, 1993; Sengenberger, 1993). Such a reorientation is also associated with increased integration between conceptual (or “intellectual”) and operative (or "physical") work (MacDuffie, 1997; Kenney & Florida, 1993). This emphasis, however, does not stem from initiatives to humanize production processes or to improve the quality of workers' lives; but rather, this impulse is motivated by economic imperatives.

In order to cope with the uncertainty and instability of the working environment, increased autonomy and training of workers is necessary, and requires more sophisticated coordination and control mechanisms than the former hierarchical structures of coordination provided. Particularly, these more sophisticated mechanisms require the **mutual trust**, **involvement** and **collaboration** of the worker (Heising & Littek, 1995). Achieving a significant degree of trust requires stability in labor-management relationships, improved employment security, and a favorable climate for industrial relations, etc. All of these factors necessitate a **communicative rationalization** process (in the sense of Habermas (1985)), which stresses the importance of agreement and consensus through discussion and argumentation**,** together with the hierarchical and market criteria (cf. Dubois et al., 1995: 300, 301).

(d) Organizational reflexivity. Furthermore, there exist attempts to develop a kind of dynamic **learning organization**, in a constant process of environmental assessment and adaptation, introducing reflexivity practices into the everyday activities of the firm, and facilitating the continuous improvement of the organizational functioning (Kenney y Florida, 1993).

As such, several investigations and publications (cf. OECD, 2000; Davenport y Prusak, 2000; Nonaka y Takeuchi, 1995) have focused on **knowledge management** processes within organizations - to capture or "externalize" tacit knowledge; to facilitate knowledge diffusion; to design physical or digital spaces and activities, in order to promote knowledge development; etc. These are manifestations, at the organization level, of a global trend towards a "knowledge society" and they are part of **organizational reflexivity** processes. Knowledge management, both within and between organizations, has special potential to support and accelerate innovation, so it becomes, particularly in advanced sectors, a valuable factor for achieving competitive advantages. Insofar as innovation is a crucial requirement to adequately cope with the current environment, knowledge management becomes an adaptive necessity for firms.

It should be noted that the initial theoretical models that tried to systematize the components of the emerging organizational paradigm did not attend to this particular component – reflexivity and knowledge management -, with the exception of Kenney & Florida (1993); but, in the last years it has adopted a more prominent role, and nowadays it is possible to make a general reinterpretation of the new organizational paradigm from within the "reflexive modernization" frame. [5]

(e) Inter-firm networking. The process innovations required not only redefine the points of interface between departments within a company, but they also redefine the external connections with suppliers, subcontractors, and other companies and institutions. Developing complex webs of alliances, agreements, joint ventures, and subcontracting and licensing relations have

[5] About "reflexive modernization" cf. Beck, Giddens & Lash (1997).

been a very important strategy for coping with the fast pace of change in the economic, technological and institutional environment of the firms. The complexity of the external links requires mechanisms of coordination and control differing from the simple hierarchical (formal) and market strategies of governance or coordination; it also requires important degrees of **external** (across market) **collaboration.** Consequently, a new configuration, based on networks, has emerged, transforming the competitive scenario Castells, 1996; Gomes-Casseres, 1996).

(f) Use of Information and Communication Technology (ICT). ICT has contributed to the organizational transformation in multiple ways: it facilitates redesigning developed through Process Reengineering; it facilitates communication and coordination in global networks; it supports working and collaborating in virtual teams where members could participate from any place in the world; it makes possible the registering and accumulation of organizational experiences, in a digital format, facilitating, in such way, knowledge management; etc. For the Neo-Schumpeterian approach, this new technology affects the entire economy, influencing the cost structure as well as the conditions of production and distribution throughout the world, thus becoming one of the key elements now shaping the new techno-economic paradigm, which represents the fifth Kondratiev long wave: "the information and communication Kondratiev" (Freeman and Pérez, 1988; Freeman, 1987). ICT is a factor potentiating changes in firms, especially those referred to inter-organizational networks (Castells, 2000; OIT, 2002).

Other aspects of the characterization of post-Fordist paradigm go beyond the scope of our investigation. One, undoubtedly very important, factor is the relationship of this paradigm with the evolution of new **financial systems**, enabling an autonomization of their operations, along with creating new mechanisms of global coordination among financial centers (Harvey, 1990). Another element, of unquestionable

relevance, is the relationship of these organizational changes with **Neoliberal ideology and economic strategy** that has induced significant transformations in States' action and upon their economic institutions and policies. These two elements remain in the background of the changes discussed here, but in our research we have not made this the direct object of attention or inquiry.

Furthermore, several researchers, have emphasized the **negative** characteristics associated with the emergent organizational procedures (the "mean" side of the "lean" production). Some of these are distortions of the previous principles - for instance, restrictions on effective worker's participation - but others could be legitimately claimed to be additional "principles" or key elements of these models, though perceived as "perverse" from the point of view of workers:

(g) Work intensification and extension. The constant reduction of production time and the simultaneous increase in actual production through continuous process-improvement brings about reiterated increases in work demands and intensity (Rinehart et al., 1997; Babson 1995 b.; Adler, 1995; Graham, 1995; Unterweger, 1993). Multiskilling, work cellules, just-in-time, on-spot quality control, and other diverse, new procedures, multiply work demands, and saturate, in an ever increasing way, the working time and intensify the work pace. The same work teams operate, implicitly, as a mechanism of **social control and pressure** - instead of as protection against overload originating in the hierarchical line -which hitherto has been a traditional function of informal groups.

(h) Employment reduction. Associated with the organizational lightening practices and the emphasis on job flexibility, there has been a significant elimination of jobs through externalization of activities, and massive layoffs, especially notable in periods of economic crisis. This has been, apparently,

an important component of the search for flexibility, although an extremely negative practice for the workers excluded from core firms and core jobs.

(i) Union cooptation or union weakness. The prototypical example of union cooptation is the Japanese company, with unions incorporated to the hierarchical line, without real independence. On the other hand, many investigations have evidenced adjustments and restraints obtained through **union pressure** - for instance, regulation in the use of temporary work, more emphasis on training (Babson, 1995 b.: 243) and the inclusion of relief workers to fill in for wokers who are absent or injured (Adler, 1995: 232), etc. In the non-unionized plants the labor intensifications have been harder, and the absence of the more motivational elements of the post-Fordist methods of production have been replaced for other forms of tacit pressure, such as the increasing use of temporary workers (Graham, 1995: 86).

Such elements or dimensions have important internal articulations and a significant degree of coherence; therefore, it is reasonable to say that they constitute an **organizational "paradigm"**.[6] The above-mentioned characteristics reflect **a new way to conceive firms and their connection with the environment.** They constitute a new way of looking and appraising the organization, which redefine many of the assumptions that prevailed under the Fordist paradigm.

Terminologically, here we have opted to include this set of features, lacking a better alternative, under the name "**post-Fordism**". Certainly, it is an indefinite name that doesn't refer to the distinctiveness of the new configuration, but rather to its temporal sequence with Fordism. A more descriptive name should imply its reflexivity, flexibility, network connections among firms, and knowledge management. But what

[6] However, these features (a. to i.) are present with dissimilar weight and interpretation, in the diverse new theoretical models.

name? This thesis is not the most appropriate place to celebrate such a baptism. It will be better to use denominations with public legitimacy and diffusion. Therefore, we will confine ourselves to the term, "post-Fordism". [7]

In this new configuration we see the organizational expression of **late capitalism**, of modernization in its advanced phase of "**reflexive modernization**", still in the process of extending itself throughout the world. We don't mean, by use of this designation any abandonment of the capitalist logic inherent to Fordism, but only that post-Fordism involves a new articulation, markedly different from the previous one. Neither are we affirming uniformities across societies. Fordist's components and articulations are capable of adopting multiple and varying concrete manifestations, according to the industrial context, institutional arrangements and history of each particular society (Boyer and Hollingsworth, 1997). In fact, there are innumerable differences in the way these post-Fordist principles and traits have been adopted: for instance, in Japan, Germany, Sweden, and the United States (cf. Jürgens, 1995 a. and b.; Berggren & Nomura, 1997; Boyer and Hollingsworth, 1997). As such, we have chosen the Chilean case as the central focus of this empirical research.

The above-mentioned characteristics, or dimensions, which comprise the emergent post-Fordist paradigm, have been addressed here in a general way. This is in order to avoid saturating this initial presentation. In the following chapters we will expand the explanation when referring to specific changes of the investigated firms, introducing more complexity into each analysis.

[7] Some authors have used the term "After Fordism", arguing it is more neutral, without the connotations of "overcoming" that would have the term "post". However, we think this is an excess of subtlety that could pass unnoticed for most readers.

2. Fordism and post-Fordism in Latin America

2.1. Fordist period

To understand organizational changes in the 1980s and 1990s in Latin American firms would require knowledge of their previous configurations and characteristics. However, it is not easy to have sight of a comprehensive overview of the historical evolution of changes and innovations concerning methods of organizing production and work in the Latin American industries during the previous decades of this century. Primary studies on industrial changes have been conducted from macroeconomic perspectives. The empirical research on firm transformations - at a micro level - is scant and dispersed. Regretfully, there have not been any Alfred Chandlers or Harry Bravermans trying to discern patterns of evolution in the Latin American scenario. Therefore we only limit this presentation to sketching the main traits that are important when considering the analysis of "post-Fordist" innovations.

(a) Late Taylorism. The systematic engineering study of work to improve efficiency, in the Taylorist tradition, by standardizing, routinizing, simplifying and fragmenting work processes, with engineers systematically employed in designing and planning work processes, was not a widespread trend before the 1950s. In Brazil, for instance, Leite (1994: 128) says that only around 1956 did a fast diffusion process of Taylorist procedures begin, which would be generalized in the 1970s. Similarly, Catalano and Novick (1998: 32) mention the period 1950-1975 for the diffusion of Taylorism in Argentina.

In comparison to developed countries, Taylorism had been introduced significantly later and, moreover, even in the 1980s many industrial firms had not implemented Taylorism, nor had they begun processes of work

rationalization.[8] This would imply, afterwards, a widespread coexistence of Taylorist and post-Fordist strategies.

(b) Disciplining and control vs. efficiency. During the Fordist-Taylorist period in Latin America, the form of work organization was characterized more by the control and discipline of workers - minimizing conflict between capital and labor - than by efficiency and the maximization of productivity (Leite, 1994: 134; Fleury, 1983: 106; Catalano and Novick, 1998: 32). This strategy reinforced authoritarian patterns of relationship between managers and workers and has created social and cultural obstacles, within firms, for future efforts for implementing participatory forms of work organization.

(c) Restricted product markets. The secondary, or limited, interest in productivity growth could be associated, in part, with restrictions on the demand side. In Latin America, a mass-consumption market, similar to those of the developed countries, has not existed. The market for manufactured consumption products was generally restricted to the upper middle- and upper-classes; only seldom including workers, specially those in key industrial sectors (De la Garza, 1995: 77; Leite, 1994: 128). So the positive dynamics between high wages and consumption, characteristic of the typical Fordist model, in these countries only benefited a small sector of workers, intensifying labor market segmentation.

(d) Profits associated with political influence on state regulations. In reference to Argentina, Catalano and Novick, 1998: 33) claim that profitability depended "much more upon the capacity for political articulation as a factor of influence on the overall way the economy was regulated (...), than upon the configuration adopted by the technical, organizational and social

[8] A Colombian firm, producing bodies of vehicles, with 600 employees, studied and depicted in detail by Dombois (1992), is a case representative of this situation.

components of the work organization model". This assertion could be easily generalized to other countries in the Latin American context.[9] This is other factor serving to distract the attention from matters of efficiency and productivity towards political considerations both specific to plants (such as discipline) and more general concerns (such as influence on state decisions).

(e) State regulation of labor disconnected from macroeconomic requirements. The normative regulation of labor in Latin America was developed in the 1930s, before the diffusion of Fordism-Taylorism in the region. So, it was not associated with sustaining the stability of demand to guarantee the adjustment with mass production, but with political pacts and capabilities of different social groups to influence the State (De la Garza, 1995: 76). This is the social and institutional situation that, in Chile, has been acknowledged under the term “Compromise State” (Moulian, 1982).

Due to these peculiarities, the Fordist period in Latin America has deserved being called "**peripheral-Fordism**" (Lipietz) and "**proto-Taylorism**" (Catalano and Novick).

2.2. Post-Fordist period in Latin American manufacturing firms

In Latin America, the economic changes in the 1970s and 1980s have emerged with the end of the import substitution industrialization that prevailed previously, and the increase of market liberalization, labor deregulation and export orientation. In addition, the role of state in economic regulation has diminished significantly.

This has signified a completely different environment for economic organizations that has compelled them to increase efforts to innovate. The failure to adapt has

[9] Cf., for instance, Montero (1997), regarding Chile.

provoked massive firm deaths, especially around 1981 with the economic crisis Also, many firms, especially in the automobile industry, have relocated their plants, looking for better conditions in terms of economic incentives, low wages, decreased unionization and so forth.

Besides the global or extreme alternatives - death or relocations -, clearly there has been a wave of internal changes and "modernizations" in Latin American firms. Are these changes shaping post-Fordist organizations? Is the post-Fordist model providing direction for the changes? The answers to these questions are multiple and diverse, representing only partially the experiences of the industrial sectors of Latin America. Certainly, many more investigations are needed before obtaining a more defined picture. Nevertheless, there are some lines of organizational change or innovation, in the 1980s and 1990s, that have been described by researchers as more salient. Some of them are the following:

(a) Significant diffusion of **computer-controlled production machinery** (Novick, 1991; Boon & Mercado, 1990; Carrillo, 1990; Wilson, 1990; Mertens & Palomares, 1988; Shaiken & Herzenberg, 1988). This programmable automation allows easy adaptations of production processes to a diversified demand, so it is an important means of flexibility. This technology permits firms to respond more quickly to changing market demands, to produce in small batches with the low costs of mass production, and to introduce rapid product and process innovations (Wilson, 1990).

(b) Increasing adoption of **Just-in-time** procedures (Carrillo, Mortimore, and Estrada, 1998; Bresciani, 1997; Posthuma & Zilbovicius, 1995; Micheli, 1994; Novick, 1991; Carrillo, 1990; Wilson, 1990). JIT implies global readjustments in production processes to respond to reduced stocks, and forced changes in quality control process. Additionally, the external JIT links with providers createing pressures on these other firms to change,

In association with JIT, automation and other technological changes, an increase in **working intensity** has been widely reported: acceleration of working pace, multiplication of tasks per workers, reduction of free time, new working demands, etc. (DIEESE, 1995: 25 ff.; Echeverría & Herrera, 1995).

(c) Outsourcing and subcontracting practices are spreading in different industries (Geller & Ramos, 1997 a.; DIEESE, 1995; Soifer, 1995; Geller, 1994). The externalization of production and service activities have had significant effects on cost reduction and labor market segmentation - the main cost reduction is in wages and worker benefits. Subcontracting relations create multiple production chains, linking big and small firms, formal companies with informal producers; in many cases, even, the subcontracts themselves take place within the same contracting firms (Echeverría y Herrera, 1995; Díaz, 1993).

Díaz (1993) hypothesizes that instead of industrial districts - a central component of the Piore and Sabel's model of "flexible specialization - in Latin America, a crucial adaptive method is the use of **subcontracting networks**, based on labor market segmentation, and on the great economic asymmetries of Latin American countries, that the subcontracting relationships reinforce.

(d) Considerable **labor flexibilization** (Agacino & Echeverría, 1995; Micheli, 1994; Carrillo, 1990). Firms have extensively applied a "**numerical**" kind of flexibility: reducing the number of permanent employees, by way of incorporating temporary workers, externalizing activities and subcontracting work; these temporary or subcontracted workers operate as buffers protecting firms against economic fluctuations, and, additionally, they are a means to reduce the costs and discipline associated with a labor force.

Labor flexibilization has been facilitated by changes in labor legislation and by general labor market deregulation which occurred in the region since the 1970s. Some of its effects have been casualization of work and increased processes of segmentation, both in the internally (inside firms) and externally (within labor markets). Also, in a lower degree, firms have developed **functional** flexibility, through multi-skilling, job rotation, and new designs such as work cells.

(e) Increasing **changes in work organization** (Carrillo, Mortimore, and Estrada, 1998; Mertens, 1997; Hernández, 1995; Posthuma & Zilbovicius, 1995; Micheli, 1994; Novick, 1991; Carrillo, 1990). In a significant number of firms, team working, quality circles, reduction in hierarchical levels, assignment of quality tasks to production workers and job rotation, have been reported .

Nevertheless, there are repeated reports of restricted or apparently distorted ways that firms implement these measures in work organization. These measures have been employed along with reduced work autonomy, increased control, preservation of traditional supervisory control, use of inexperienced and unskilled labor force (preferably young), low wages, restricted responsibility of quality control, high turnover (reducing job involvement and implying loss of training), and a high female component within the labor force (e.g., the case of Mexican maquiladoras) (Kenney et al., 1998; Carrillo, 1990; Kusel, 1990; Wilson, 1990; Shaiken and Herzenberg, 1988). Also, participatory programs have been used, in many situations with ideological intentions without the introduction of effective changes (Bayón, 1997).

In some cases, these changes in work organization have been only a part of more global change efforts, following **Total Quality Management** approaches, and sometimes including JIT reorganizations.

(f) Union participation limited or absent (Cárdenas, 1998; Bayón, 1997; Montiel, 1991; Carrillo, 1990). In many cases, firms have made unilateral decisions regarding changes in production methods, without negotiating or consulting with unions. Firms have developed diverse practices for weakening union resistance in efforts to eliminate or avoiding unionization entirely. The latter, for instance, has been the case of the relocation of Mexican *maquila* plants around the Northern Mexico border, a region with low unionization. Likewise, union responses to productive restructuring have been slow to respond, being mainly focused on reducing some more immediate and menacing effects, such as unemployment and wage reductions (De la Garza, 1995: 53-55).

However, there are also noticeable cases of negotiation, but in a more centralized way, at the industry level: some firms in automobile industry in Argentina and Brazil have introduced innovations through sector-wide agreements negotiated by representatives of managers, unions, and the State (Arbix & Rodrigues, 1998; Catalano & Novick, 1998).

Taking the above changes into account, the resulting configurations have deserved different labels, expressing, in varying degrees, each model's contrasts with post-Fordist ways of organizing in developed countries: "Pseudo post-Fordism" (De la Garza), "factory's Neoliberalism", "neo-Taylorism", "caricature of post-Fordism" (Wilson, 1990: 18), "maquilized industry" (Carrillo). In the same vein, but using a more neutral term, several authors have qualified these emergent forms as "hybrids" (Kenney et al. 1998; Catalano & Novick, 1998).

Simultaneously, several investigations, specially those performing in-depth studies of single cases, have tended to find salient Taylorist characteristics and **Taylorization processes** in the firms investigated (Weiss & Castañeda, 1990; Dombois, 1992; Montiel, 1991). These studies reveal the superposition and coexistence or "syncretism" of Fordist with more "advanced" technologies and forms of organizing work and production; moreover, in some cases there are current or recent Taylorist changes ("late Taylorism") (Dombois, 1992).

Nevertheless, it is necessary to reiterate that both the heterogeneity of the research, (the tiny samples, and the large concentration of studies on the automobile industry -where the innovation processes have been faster and more palpable); and the fact that the predominant research has generally excluded the service sector, make it difficult to extract valid and generic conclusions for the Latin American region.

3. Research Problem

3.1. General purpose of the research.

This study has **two main purposes**: **(1)** To describe organizational innovations and changes occurring in Chilean manufacturing firms in the 1990s, especially in the period 1998-2001, and to determine the importance of "post-Fordist" innovations. Special attention is given to weighing changes favorable to workers' development against ones that are deleterious. **(2)** To analyze workers' experiences in face of these organizational changes: their perceptions and evaluations of the changes implemented in their plants, and the resulting individual and collective actions.

3.2. Specific questions and hypotheses

Post-Fordism in Chile.

Post-Fordist innovations have widely spread throughout the world and now are part of the overall managerial discourse and organizational changes in Latin American firms. Research in the region has evidenced the increasing implementation of these new practices (Carrillo, Mortimore & Estrada, 1998; Kenney et al., 1998; Tuman & Morris, 1998; Mertens, 1997; Posthuma & Zilbovicius, 1995; etc.). The results have been heterogeneous, with some authors showing the ineluctable advance of post-Fordism, and others reporting disguised new versions of Taylorism and Fordism. Along these lines, our general question are whether or not Chilean manufacturing firms have significantly incorporated post-Fordist practices and what these characteristics are.

Specifically, we will review the post-Fordist components –organizational flexibility, reflexivity, use of ICT, etc.- in order to determine the modalities, relative relevancies

and interconnections among those elements in Chilean firms. Thus, we seek to analyze, in reference to such dimensions, their degree and form of adoption in Chilean firms.

Post-Fordist innovations could be implemented in a variety of forms: some very favorable for workers - as it is stated in typical post-Fordist models (e.g. Kenney & Florida, 1993; Womack, Jones & Roos, 1990) - or very negative - as critics of post-Fordism have claimed (e.g. Rinehart, 1997; Babson, 1995 a.; Graham, 1995; Parker & Slaughter, 1988). Since 1989, Chile has been in a process of democratic transition after the Pinochet dictatorship. An important query, which has not been sufficiently addressed by the academic research, concerns the manifestations of this process **inside** factories. Have the effects of the previous authoritarian regime been neutralized? Have post-Fordist changes been adopted in ways favorable or unfavorable for workers? Have workers escaped, in this period of democratic transition, from their marginalized situation?

In the democratizing process during the 1990s in Chile, little attention has been paid to workers in the factories. In general, the emphasis has been placed on entrepreneurs and managers as the main actors. Workers' situations in the industrial restructuring has been a **neglected area of policy**.

Until 1973 Chile has had a significant upward trajectory of labor organizing, with powerful unions and a combative tradition. Allende's government (1970-1973) was declared the "workers' government". In reaction, under Pinochet's dictatorship (1973-1989), labor organization was almost completely destroyed or neutralized. Apparently, ten years of democratic government have not been able to reconstruct workers' unions' strength and capabilities. This fact has had important effects inside firms. In the debate on the "Chilean model" of economic modernization and political transition to democracy, the situation of workers, in the perspective outlined in this

research, is a relevant element that has been absent in previous research and should be included.

In 1983-1988, after a major economic crisis, Chilean firms adapted themselves to the macroeconomic conditions **without any important modernization of organizational practices**. The increase in production was achieved through a mass-hiring of workers at low wages (after a period of very high unemployment) and through a more intensive use of the available machinery and equipment (Agacino & Rivas, 1995; Wormald, 1995).

In 1989-1992, the changes in the post-Fordist direction were **slight** and had traits **negative for workers**. This was our conclusion after analyzing data on Chile obtained by a regional project of the International Labor Office (ILO) and the Canadian International Development Agency (CIDA) (Geller & Ramos, 1997 a.). Our study, based on the manufacturing sector, showed that until 1992 the firms had not significantly adopted the practices of post-Fordist models. Only meager advancement was achieved in work reorganization and "humanware"[10] development - such was the case regarding worker autonomy, work teams, decentralization, just-in-time systems, quality control in the workstations, and management of human resources. In general, management practices were quite distant from the proclaimed and virtuous aspects of post-Fordism. The only verified concordance of Chilean practices with the post-Fordist model was the diffusion of production outsourcing, although outsourcing occurred without fine tuning the relationship in terms of information flow, technical assessment, personnel support and reciprocal trust that post-Fordist approaches emphasize.

In contrast with the absence of positive post-Fordist production qualities, the **"dark" elements** attributed to post-Fordism were present and generalized: high work

[10] The term "humanware" is used by Shimada (1993) to refer to "soft" innovations in firms, concerning forms for managing and organizing people.

intensification, stressful pressure derived from speeding up the production process, and extension of working hours. Furthermore, production flexibility was obtained principally through subcontracting, lengthening workdays, intensifying work, or adding temporary jobs (Echeverría & Herrera, 1995).

In apparent contradiction with our previous results regarding the 1990-92 period, other studies carried out in the 1990s have presented a more positive picture, claiming the emergence of a "new Chilean management model" with clear modern positive traits (Majluf, Abarca & Rodríguez, 1997) and emphasizing changes occurring in the upper level of the firms (Castillo, Maggi & Dini, 1994), but not attending, or only doing so in a partial way, to changes at the shop-floor level. In the present study, to clarify this situation we adopt a wider perspective, including the different levels and areas of the firm.

Some of the **specific questions** we are intending to answer are: **(a)** How important -in terms of extension and intensity - have post-Fordist changes implemented in recent years (1998-2001) been? What are the main traits of post-Fordism that have been adopted? **(b)** What is the relative weight and relevance of post-Fordist practices that are **negative** for human resources development? **(c)** What are the **trends** during the 1990s? Particularly, are managers and entrepreneurs increasing their attention on developing human resources, as manifested **practically** in reinforcing job enrichment measures, training, and other practices contributing to that purpose? What has been the evolution of the "dark side" of post-Fordist changes?

Our **general hypothesis** is that post-Fordist innovations among Chilean manufacturing firms have been applied in a selective way **detrimental for workers**. We anticipate that at the shop-floor level (or, more generally, in the “operating core”, using Mintzberg’s term) the negative aspects of change will prevail **(H.1.1.)**. Changes will be widely spread with regard to the organization of production, but not in work organization nor in management of human resources **(H.1.2.),** introducing a

partial or weakened post-Fordism. This hypothesis contradicts much of the managerial public discourse in the country; discourse that could be interpreted as being part of a more general "myth of modernization" that is uncritically and ideologically sustained (Moulian, 1997).

This assertion is based on the consideration of institutional factors and on the results of our past research. The situation in 1992 did not promise the progressive changes proclaimed in the prevailing managerial discourses. The past authoritarian government of Pinochet (1973-1989) left its mark on labor legislation and on corporate cultures (Díaz, 1996). Unions and the labor movement were very weakened and there were no signs indicating that unions had a voice with regard to work organization and productivity management, or if unions did have a voice, that it had been listened to. The weakened situation of labor unions has not improved significantly during the decade (Espinoza, 1996). Moreover, political parties and other societal actors have not shown a substantive and profound attention and care towards the problems and options of industrial work and organization.

Firms' organizational changes can be investigated at different levels or considering different phenomenic fields of the firm. Some empiric investigations in Chile have concentrated their attention in the more managerial and global levels, covering aspects such as strategy and organizational structure (for instance, Castillo, Maggi y Dini, 1994). Others have focused on changes occurring in the operative core (for instance, Echeverría y Herrera, 1995).

There have been some integrative efforts, such as the analysis made by Abramo, Montero y Reinecke (1997), who gather results from diverse empirical studies, about several levels of firms' reality, with special emphasis on production chains. Also, there is a significant study by Montero (1997) who frame firm's changes in historical perspective, focusing on entrepreneurs, as social actors. Others, such as Calvo (1998) have made some partial integration from study cases, showing the most

salient features of changes occurred. With all this research, the knowledge about the social reality of Chilean firms has had an important advance during last decade; however, still there are many blanks and loose ends. Here we intend to go one step forward, in this line of deepening and integration, to describe and understand the current reality of the firm. So, through a methodological approach both quantitative and qualitative we intend to describe and analyze changes occurred **at the different organizational levels and phenomenic fields**, of Chilean firms.

Consequently, we will refer to a wide scope of changes, from global and strategic ones to other, more "local" changes, concerning job and work design. In such a way, the specific points to address, regarding the first research focus, will be: (1) corporate strategy, (2) organizational structure, (3) global programs for organizational change, (4) changes concerning the firm's connections with its environment, (5) use of information and communication technology, (6) investment in hard technology, (7) work organization (8) and, management of human resources.

Workers' experience with organizational change.

This is the **second focus** of research: How have the organizational changes implemented by Chilean manufacturing firms been **experienced and interpreted** by workers?

We will consider three aspects in workers' experience: work in itself, workers' participation in organizational reflexivity processes, and reward-systems and socio-cultural working conditions. In each case we will study the **perceptions and evaluations** that workers have of how these aspects have been modified as a result of the adoption of organizational changes.

(i) **Work in itself**. We will analyze the changes that workers experience in some core dimensions of jobs: autonomy, task variety, feedback,

opportunities for interaction and development (Batt & Appelbaum, 1995; Leite & Rizek, 1997; Leite, 1994).

(ii) **Workers' participation in organizational reflexivity and learning processes.** We will review the degree and form in which workers are being incorporated in firms' processes of self-analysis for improving work and organization. We will try to discern how workers' knowledge and experiences are being employed in the firm's context. Also, we will include perceptions on changes occurring in working pace, work load, training, participation, career and development opportunities for workers inside the firm.

(iii) **Normative or socio-moral order of the firm.** We will consider the characteristics of the relationship between workers and employers and managers, and the industrial relations institutionalization. We will give special attention to the way rewards are distributed and managed, considering wages, economic incentives, and non-material incentives. Particularly, we will analyze how workers perceive the relationship between organizational changes, improvements in their productivity, and changes occurring in the rewards received. Specifically, we will investigate workers' perception of **equity** in the relation between new working demands and rewards, and between skills and training acquired vs. rewards received (Rojas et al., 1995).

CHAPTER II.
RESEARCH METHODS

1. SAMPLING

The main units of analysis are **medium and large firms, in the manufacturing and services sectors**, located in the **Metropolitan Region**. The reason for selecting firms of those sizes is that larger firms are first adopters of organizational innovations, which is associated with several factors: their larger availability of resources and external connections, allowing them to receive first hand information about innovations; their bigger organizational complexity, demanding changes; etc. [11]

To focus the research in the Metropolitan Region is a choice supported on the great centralization of Chile: this region concentrates 65.5% of all medium and big companies of the country. On the other hand, taking into account this same centralized reality, it can be assumed that Metropolitan Region's firms, especially large and medium ones, are the most advanced in terms of organizational innovation; and that they serve as normative and mimetic reference for those of other regions.

Most part of the previous research carried out in Chile about changes in firms' organization and working conditions have been referred to the manufacturing sector. In the current study, we include also the services sector, given the significant growth experienced by this sector, which, in 2000 contained 71.9% of the non agricultural employment (ILO, 2002: 116), and also given that some of their most advanced sub sectors have special affinities with the post-Fordist paradigm.

[11] For a review and empirical analysis of this effect of firm's size cf. Ramos, 1999.

In the Metropolitan Region, from all people employed in firms larger than 10 workers, 64.8% of them work in medium or large firms. [12] This reflects the quantitative weight of the set of workers we have as universe of interest. On the other hand, the industrial sectors considered in the research contribute with around 49% of the gross domestic product. [13] These figures allow pondering the relevance of the sectors of firms studied.

In both Manufacturing and Services, we included traditional and advanced sub sectors. Thus, in Services we took trade, a traditional sector, and telecommunications and finances, which are advanced sectors. In manufacturing, we selected metal & machinery and food sectors, more traditional, and the electric equipment sector, more advanced. [14]

The quantitative distribution of the study universe is in the following table. It also includes the number of medium and big firms in all the country.

[12] Calculations based on data from MIDEPLAN, División Social, CASEN Survey 2000.
[13] According data from INE (2002), corresponding to 2001.
[14] For the classification of "traditional" and "advanced" sectors we considered the distinctions made by Castells (1996).

TABLE II.1: UNIVERSE OF REFERENCE FOR THE STUDY: MEDIUM AND LARGE FIRMS, LOCATED IN THE METROPOLITAN REGION, IN SELECTED INDUSTRIAL SECTORS (absolute numbers)

INDUSTRIAL SECTOR	TOTAL	SIZE	
		MEDIUM	LARGE
Manufacturing	2.422	906	1.516
Commerce	4.313	1.843	2470
Finance	1.528	681	847
Transportation and communication	603	282	321
Total of firms in previous sectors, in Metrop. Region	8.672	3.518	5.082
Total of firms in Metrop. Region (all economic sectors)	11.245	4.634	6.611
Total of firms in the country	17.159	7.605	9.554

Fuente: Corfo (2000), with data from the Chilean Internal Revenue Service (SII), 1997.

Thus, the specific **universe of study** would be constituted by the **8.672** medium and large firms, from the manufacturing and services sector, located in the Metropolitan Region.

The empirical research was based on the in depth study of **32 firms**, chosen in such a way to guarantee they qualitatively represented the variety of the universe. The distribution of these firms is in next table. Another characteristics of each firm in the sample can be found in annex.

TABLE II.2: SAMPLING OF FIRMS STUDIED (absolute numbers)

INDUSTRIAL SECTOR	SIZE		Total
	Medium	Large	
Manufacturing	9	9	18
Services	7	7	14
Total	16	16	**32**

For classifying firms according size, we have used the National Bureau of Statistics' categories, in whose definition medium firms are those with 50 to 199 workers, and large are those with more than 199.

To study workers' experience, we selected in each firm an intentional sample of around 20 workers, seeking an adequate representation of the different types of employees, considering seniority and kind of job, and looking for analytic generalizability. The result was a sample composed by **673 workers**, which we will depict in the respective chapter (Chapter VI).

2. COLLECTING AND ANALYZING INFORMATION

The research includes a combination of methods, qualitative and quantitative, to generate converging lines of evidence, in a "triangulation" process, reinforcing the validity of the research. The main ways for gathering empirical information have been interviews with managers and workers, survey and focus groups with workers, ant the use of secondary sources. [15] The quantitative part of the research aims to detect patterns and regularities. The qualitative side aims to understand actors' meanings and perspectives.

[15] The fieldwork was made between May 2001 and December 2002.

Interviews with managers

The main purpose of these interviews is to obtain a description of the organizational changes and innovations carried out by the firm during the previous years, specifically during the last three. We made in-depth interviews with upper level managers of the 32 selected firms. In several firms we interviewed more than one manager, so finally **45 interviews** were made. They lasted an average of around two and half hours, being necessary that several of them were carried out in several parts. All interviews were tape-recorded. Besides the formal and recorded interviews, there were also other informal conversations and observation activities.

To get access to the chosen firms was a very complex and slow process; but once obtained, managers showed openness and we could obtain a great quantity of information.

In association with the interview, we applied a **standardized form**, to facilitate the quantitative analyses later on. This form was filled partly during the interview and the rest was completed after it, checking the recorded interview's content. The form consisted of more than 260 items or variables that later were processed statistically.

Both the interview's questionnaire and the standardized form were in two formats; one for manufacturing and other for services, with variations in the phrasing of questions and some different items.

Secondary sources

Regarding each firm, besides the material of the interviews, we also generated a dossier with business press information, company documents, and available information in their official Web sites.

Survey for workers

A survey was applied to a sample of workers, resulting **673** completed questionnaires. The survey looked for workers' perceptions and evaluations about organizational changes occurred in recent years, specially the last three, and their effects. The questionnaire included more than 217 items of information. Almost all questions were closed, although there were around 10 open questions, requiring a brief answer. Just as in the case of the interviews to managers, this questionnaire was in two different formats: for manufacturing and for services. We made a pretest of the questionnaire applying it to 40 workers.

Workers demonstrated interest in the topics of the survey and very good disposition to answer. Main difficulty was to obtain, from their employers, access to them, being required a lot of insistence and persistence for it. Individuals took around 45 minutes to answer the questionnaire.

Focus groups and interviews to workers

To supplement qualitatively the survey information, eight focus groups and 20 interviews to workers were carried out. This means that, in total, **qualitative information** about workers' reality was obtained from approximately **90 employees**. Group sessions and interviews covered, evenly, the combination of industrial sectors and firm's sizes. There were four focus groups in

manufacturing firms and four in services firms. Six of the focus groups were in traditional sectors and two in advanced sectors; the latter was supplemented with 20 interviews to workers in advanced firms, to get the variety that interested in the investigation.

Analysis of the information

Results coming from the standardized form for managers and from the survey to workers were processed statistically using the **SPSS**.

Qualitative material was processed and analyzed using the **QSR Nvivo** software. In this way, more than 140 nodes were constituted, integrating and connecting the textual material generated. Subsequently, such nodes were object of reiterated new codifications and analyses.

Presentation of the results

The quantitative data analysis served as foundation for hierarchizing and pondering organizational changes and perceptions. This was deepened through the qualitative analysis. Thus, throughout the following text there are tables with quantitative data, framing interpretations based on qualitative material. Regarding this qualitative analysis, in some cases we include specific references to the cases; when we do this, we indicate where this material is located in the coded transcripts.

In the tables with data about the firms, percentages are usually calculated with regard to the total of firms on which we have information in the respective point; but, in almost all the tables, when it lacks information, it doesn't affect to more than two or three companies.

Because we promise confidentiality to the firms studied, their names have been replaced by initials specifying the **industrial sector** (M or S) and the **size** (M or L), in the same order, of each particular firm. In such a way, for example, **ML4** is the large manufacturing firm number 4, on which there are other basic data in annex.

CHAPTER III.
STRATEGIC AND STRUCTURAL REDESIGN

The first level of organizational changes we will deal with in our discussion refers to the changes that take place within the firm's **strategic orientation** and to the **adjustments introduced to its general structure**. These are critical dimensions that consider the global direction of the organization's adaptive measures that come as a response to changes in its environment.

In addition to the changes related specifically to firm strategy and structure, we will review the global improvement efforts expressed as **deliberate change programs**, such as Total Quality Management and Reengineering, which count with systematized procedures intended to carry out those organizational changes, based on theoretical and technological foundations.

1. Changes in firm strategy

In periods of greater environmental stability, where competition is less fierce, the development of firm strategy shows greater persistence and lower complexity. This scenario has prevailed during the import-substitution industrialization period, particularly in the case of manufacturing firms. The greater environmental turbulence that originated in the seventies has caused a general commotion among firms and has forced them to analyze and redefine their overall action policies regarding the market. They have even had to rethink the product or service they deliver as well as their mission, the very basic purpose of their existence as an organization.

Nowadays, it may be stated that analyzing and redesigning firm strategy - whether through formal procedures or other more informal methods that give rise

to “emerging” strategies - come as an unavoidable imperative. Additionally, this type of change precedes other changes within the organization and inevitably conditions them. Along these lines, a study on the 1,000 largest firms in the U.S. showed that in almost all of them (96%) the organizational improvement efforts followed a clearly defined business strategy, and in 55% of these firms, this was a prominent feature of the change process (Lawler, Mohrman and Ledford, 1998: 90). In fact, approaches concerning strategic planning or strategic management have extended throughout the world since the 1980s, with the corresponding consultantships burgeoning as these approaches have disseminated. Many books have also been written in this respect, ranging from more formal perspectives, involving a logic of systematic analysis and planning - with great quantitative emphasis-, to more open approaches that basically seek to promote a “strategic intelligence” within the organization.[16]

Thus, most firms in countries of advanced capitalism are considering this level of change in an increasingly systematic way. In Chile, attention to strategic change has also become a key element in managers’ consciousness and practice. There is now a strategic awareness reflected in the attention given to changes occurring in the environment and the search for answers to them, which until the 80s simply did not exist. Firms that fail to make significant strategic thinking efforts, in an environment where the competition is making rapid moves that alter such environmental conditions, run the risk of seriously weaken their profitability and therefore put their very existence at stake.

1.1. “Too late”: the risks of failing

Our study shows that MM1, a medium-sized manufacturing firm, is a good example of this type of risks, which are becoming commonplace in the Chilean

[16] See, for example, a comparative and critical review on strategic approaches in Mintzberg (1994) and in Mintzberg, Ahlstrand and Lampel (1998).

managerial experience. MM1 introduced substantial changes towards the late 80s and the early 90s. Until then, the firm's main product, intended for mass consumption, was manufactured in its own facilities. But given the fact that similar imported products were entering the market at lower prices, the firm decided to add the commercialization of imported products in addition to its own manufactured items.

In recent years, however, several other firms had been carrying out a similar commercialization task, and the market for such products has not expanded; on the contrary. On the other hand, MM1 has had some other more complex products intended for sale to both domestic and foreign mining and construction firms, where this firm could have used its engineering expertise and experience with no significant competition. Nevertheless, they had not been subject by MM1 to a significant process of commercialization, so sales were still reduced. Today, the Technical Manager (in charge of the production area) believes this area of industrial products could become the firm's strong point, if a strategic turn in the firm's activity were implemented around it. But this redefinition has not occurred yet, the necessary measures to support it have not been taken; the investments necessary to develop this area have not been made, so it may be already too late. The manager we interviewed recognizes that the firm has failed to find its right strategy. The managerial staff did not carry out the necessary study and thinking to develop it, although the ideas were apparently up for grabs, scattered across the minds of the different members of the organization. Thus, the firm's managers have been unable to adapt to the new market conditions, and today, despite the firm's brand prestige, they face a critical situation. The firm has laid off a significant amount of its labor as well as several managers, and the future seems uncertain.

This case illustrates the risks that derive from neglecting strategy or slow-moving strategy building, which may cause all other improvements the organization may

have achieved so far to be lost. Furthermore, the fate awaiting this firm in a not very long term may even include liquidation.

In fact, the risk of "death" of this organization is fairly high. In this respect, a study that considered the fate of the firms established in 1996[17] during the 1996-2001 period revealed that 16.2% of the medium-sized and 13.3% of the large firms had gone out of business. If we also add those firms that at the end of such period were inactive -6.0% and 3.3%, respectively-, which may well be considered another form of organizational failure, the grand total for failure rate among both medium and large firms is 20.5% (Crespi, in El Mercurio, August 13, 2003).

It could be argued that this is the situation for new firms that show the typical weaknesses and limitations of their initial period in which they are more susceptible to risks. Still, on the other hand, one might argue that new firms are more flexible and innovative, which is particularly important given the prevailing conditions. In any case, this rate is indicative of a high failure risk.

1.2. Cases of strategic dynamism

On the opposite side to the stagnation seen in the aforementioned case, we find firms that have displayed great strategic dynamism. These firms have seized the opportunity and redefined themselves as they have dealt with the difficulties they encounter along the way. A good example is SM22, a firm that provides outsourcing services to process electronic transactions for different lines of business -insurances, banks, retail, health, etc., which is a relatively new service in this country. SM22 is a medium-sized firm established in 1995. It has experienced several difficulties during its few years in the market, the first of

[17] The study included all 67,310 firms, of all sizes, established in 1996, according to figures from the SII (Chilean Internal Revenue Service).

which struck shortly after its foundation. Initially, its market niche would consist of banking entities, the most technologically advanced sector in this field. Nevertheless, the banks that were supposedly going to buy this service changed their minds: they decided to create a proprietary firm to deliver the service. This marked the end of SM22's would-be privileged market segment. So, two years after its foundation, the firm turned towards large department stores, which implied a technological re-definition. Instead of standard processing aiming at lowering costs and increasing volumes, as would have been the case had the banks been the users, the new market segment required a flexible system that could easily adapt to the different functions required by the new customers: "tailored suits", in SM22's CEO's words.

This saved the firm from the first crisis. However, this new market was not growing fast enough, or at least it was not perceived as fruitful enough to meet SM22's expectations and to further develop its internal competencies. Thus, three years later, the firm underwent a new transformation. It was absorbed by an American multinational leader in the American credit card processing market. With this, SM22 found the support and the necessary trade connections to access the Central American and Caribbean markets. At present, and following the change in its ownership, the firm is processing the electronic transactions of some banks located in that region, for which purpose it takes advantage of the know-how, experience and technology developed in Chile (437-445)[18].

To sum up, in just seven years, this firm has seen three versions of itself, with significant changes in its market focuses and ownership. Even the name has changed along the way. Such strategic versatility is undoubtedly a critical element of its adaptability and effectiveness.

[18] The numbers in parentheses correspond to the location of the respective empirical material in a second order codification of the transcripts.

In contrast with SM22, which falls under the category of advanced service firms with intense use of knowledge and technology, SM23 is a medium-sized firm from the traditional services sector that sells mainly imported products to both wholesale and retail dealers. Despite such difference, SM23 has also proven to be able to respond, with strategic agility, to the different barriers and opportunities it has encountered.

A long time ago, some of the products it used to sell were manufactured in its own facilities. At present the manufacturing process has been virtually abandoned. That was the first of a series of important changes. Five years ago, it began to focus increasingly on wholesale and decided to close its own retail points, which seemed less profitable. Nevertheless, it re-evaluated the situation along the way and came to the conclusion that depending completely upon wholesale dealers was a risky business, so it decided to resume the utilization of its own retail points with a re-designed and better-differentiated service. Thus, it introduced a self-service system in part of its retail points and specified better the types of products to be offered depending on the socioeconomic level of their location and the customers' gender (471-482).

In conclusion, the changes that in 1997 went in one direction -preferring wholesale customers- the following year went in an almost opposite direction, developing the products and services offered to individual customers. This formula turned out to be very effective, so the next step has been growing, on a national scale, which implied increasing the number of retail points.

At present, however, new factors are stimulating strategic thinking within this firm: the competition has replicated some of the formulas applied to the service at retail points, which has led to think of different alternatives. One of the ideas being studied is internationalization. In any case, it is pretty clear that the firm will

have to be continually assessing the environment and redesigning its strategy accordingly.

1.3. Focuses and strategic priorities

In relation to modernization strategies, the public discourse of Chilean entrepreneurs includes certain recurrent topics -productivity, efficiency, quality, the importance of human resources, flexibility, participation (cf. Rojas and Aravena, 1999)- and there are others that currently are being mentioned more often: concern for the environment and social responsibility. The managers interviewed emphasized, as expected, several of these elements, but they also revealed the **effective** priorities in a more truthful manner. So, when compared with the public discourse, several noteworthy differences appear.

The following table shows the different firm strategic priorities according to their managers, who were given the possibility to mention up to three, although 28.1% of the managers mentioned just one, and 40.7% only two.

TABLE III.1 GENERAL STRATEGIC PRIORITIES, BY INDUSTRIAL SECTOR AND SIZE OF THE FIRM (% of firms where each goal has been prioritized during the last three years)

	TOTAL %	INDUSTRIAL SECTOR		SIZE	
		Manu-facturing %	Ser-vices %	Medium %	Large %
Market: diversify market, differentiate products/services, coverage	71.9	66.7	78.6	75.0	68.8
Reduce costs	50.0	66.7	28.6	50.0	50.0
Improve quality of products / services	28.1	22.2	35.7	25.0	31.3
Development of human resources	12.5	11.1	14.3	12.5	12.5
Technological development	9.4	11.1	7.1	6.3	12.5
Network development: with vendors, subsidiaries, etc.	9.4	5.6	14.3	12.5	6.3
	(32)	(18)	(14)	(16)	(16)

The differences in relation to the "official" public discourse appear to be less important than those that show the current strategic priorities vis-à-vis the ones entrepreneurs embraced a couple of decades ago. There is a substantial turnaround. First in the list of priorities -and mentioned in 71.9% of the firms- is the **market**, **commercialization**, and the adaptation to what the competition does. In other words, the focus is basically **towards the outside**. The organization is viewed from the outside towards the inside. This marks a strong contrast with the relative lack of environmental analysis in most firms until not very long ago.

The following table includes a greater specification of the strategic goals contained in this first priority. We can appreciate similarities in the relevance attributed to the diversification of the target market as well as the differentiation regarding what the competition has to offer and the market growth, whether domestic or international. The variety and differentiation goals, however, appear

to be more widespread in service firms, which may come as a consequence of a greatly competitive specific environment.

TABLE III.2: PRIORITY FOCUSES IN THE COMMERCIALIZATION AREA (% of firms where each goal has been prioritized during the last three years)

PRIORITY FOCUSES	Total (%)	INDUSTRIAL SECTOR		SIZE	
		Manu-facturing (%)	Ser-vices (%)	Medium (%)	Large (%)
Diversify the target market	28.1	22.2	35.7	37.5	18.8
Differentiate the product or service being delivered	25.0	16.7	35.7	25.0	25.0
Increase the domestic geographic coverage	18.8	5.6	35.7	25.0	12.5
Increase exports	12.5	22.2	0	12.5	12.5
Introduce changes to the corporate image	3.1	0	7.1	0	6.3
	(32)	(18)	(14)	(16)	(16)

The second most important **general** priority (Table III.1) is **cost reduction**, which is linked to the search for greater efficiency and increased productivity. This concern has been somehow stressed by the on-going economic crisis that started in 1998. In addition to the attention put on commercialization, firms have taken the necessary steps to adjust their internal operations. In fact, 38.7% of the firms had introduced radical changes to the strategic orientations of internal operations. One additional point of attention concerning cost reduction and increased efficiency are supply relationships (22.6% reports changes in the corresponding strategic orientations).

Quality comes in third place, and it is considered less important as a strategic factor. Actually, it is mentioned as a priority in only 28.1% of the firms. It must be noted, though, that this percentage could be higher, depending on how we

interpret the concept of quality. In addition to referring to the actual quality of the products and the internal processes, quality is also evaluated regarding the satisfaction of the customers' needs and expectations. Therefore, the attention to the market and customers mentioned in the first priority could reveal a concern for quality understood in these terms.

The importance of the other strategic focuses - human resources, technological development and networks- is considered secondary. The answers provided by the interviewees revealed that attention to human resources is not deemed strategically important, except in a few cases; managers do not seem to perceive them as a leveraging factor for the firm's strategy.

A similar situation occurs with technological development, despite the significant firms' investments in this field. The development of production technology and management computer technology is considered necessary but **not a competitive advantage factor**. Such investments are necessary to remain in the competitive arena, in a context where information technology has become pervasive, but in general this is not considered a winning card.[19]

Networks between firms are only scarcely mentioned as a strategic weapon, although, as we shall see later, they are gaining increasing importance. Apparently, networks have still not been incorporated explicitly as part of a firm's strategy. It may well be assumed, however, that they are in the process of being incorporated, but that the actors involved are still not very aware of their power and ways of using them. This is a type of measure that appears more as being part of a firm's **emerging** strategies than part of the formalized and declared strategies. One might also presume that the discourse is somehow lagging

[19] In contrast, not only is the human resources area in a low strategic priority level, but also last in terms of investment priorities.

behind, for in this country managers have approached the network topic, in an explicit way, fairly recently.

Internationalization is another strategic firm objective which has been rather dormant during the years referred to by the question -the last three years-, given the fact that entrepreneurs have devoted their efforts to consolidate what they already have while waiting for better economic conditions in the region.

If we compare by industrial sector, certain differences in the strategic priorities profile arise. Both prioritized attention to the market and quality appear to be more widespread in service-providing firms, whereas manufacturing firms focus on the market and cost reduction alike. Possible explanations for this are differences in the corresponding environments and corporate cultures. On the one hand, service-oriented firms face stiffer competition, and, on the other, the "service" business involves a more direct relationship with the customer. Thus, it may be stated that this makes it more "natural" for service firms to focus on customers and the market. In fact, one might be led to think that these firms anticipate -for the rest of them- the tendency towards greater strategic emphasis focused towards the outside, the customer and the market.

In the firms under study, there are some noteworthy overlaps among strategic priorities. For example, 21.9% of all firms share both the cost reduction and quality improvement goals. A prioritized attention to the market overlaps several other goals: quality, human resources, technology and networks. [20]

[20] In competitive strategies typologies like Porter's, such focuses as leadership in cost reduction and product or service differentiation, or stress on efficiency vs. quality, appear as relatively incompatible or in conflict. Firm practice encompasses, however, many overlappings reflected in our data. In this respect, the Japanese experience has highlighted the compatibility that can be achieved between efficiency and quality (cf. Womack et al, 1990; Suárez, 1996).

1.4. Strategic focuses in greater detail

The following sections review the contents of these strategic priorities.

a. Commercialization

It is generalized the greater importance attributed to commercialization as a strategic focus. This reflects a change in the prevailing priorities of the past -from the period we have called “Fordist”. In the classic Fordist logic, the Production area determines and pushes sales. In today’s prevailing logic, however, Sales, commercialization and the customer, who acts through them, lead the way. This radical inversion is expressed in the strategy to follow and influences a firm’s structure and activities.

One typical case that illustrates this change is MM14, a medium-sized machine tool manufacturing firm that sells its products to other firms. Actually, the change is still in progress, as the general manager tells us: “This firm had always been ruled by production; we sold what Production manufactured, and Sales never said ‘our customers want this’, never. So, to begin with, we are changing the rules of the game so that our sales employees can tell us what we need to do, what our customers want; we are going in that direction now. That is the reason why until not very long ago, our sales team would not leave the premises and our customers had to come and buy from us right here. We would never go out, never, never; except of course after having closed a deal, when we would go and visit the customers. (...). But times have changed. Now we need to reach out to them, lure them” (516).

Diversification

As seen before, regarding to the market, the relevance attributed to diversification becomes important. This includes diversification of the products or services, search for differentiation by developing new products or services, and offering supplementary services to support the main product or service; and this comes in response to the changes undertaken by the competition..

Nevertheless, as this strategic orientation -product or service diversification- becomes widespread in a certain industrial sector, **scaling dynamics** will tend to appear. The sales assistant manager of a large telecommunications firm tells us: "(…) all the campaigns that we have launched have been followed by [the main rival firm], which has counterattacked with identical or very similar products and, for the last two years, we have been (…) launching a new product every six months and [that firm] immediately follows with the same product. Last time, we launched on a Tuesday, and the following Monday they came out with exactly the same product. Very often they copy your idea. [This is a complicated thing to do], but you start [developing new products or services] because you don't want to allow your rival to position itself" (561).

Product and service differentiation also encompasses complex "format" changes, as has been the case with supermarkets. The hypermarket format was introduced in the 90s. In 1998, one of the existing chains (SL25) developed a new format, focusing on good service and a mix of groceries and a wide variety of other products that includes clothing and home appliances. In so doing, it compensates for the low margins of the usual products that are sold at lower prices. The greater profits are obtained from these new lines of products. The other chains are therefore forced, on the one hand, to include this format and, on the other, to enhance other formats being able to offer something different that the hypermarket format be unable to offer. So, a chain (SL27) has modernized its

original, small format, focusing on “replenish purchase”, making it the new version of the old “corner store”. All this entails changes in size, price-quality trade off, product combination, type of service, store location, etc.

The imitation of formats between chains also produces market saturation, which have made one of them set its sight on similar organizations around the world, carrying out some research and thinking about the future format that will replace the current one, however successful the current format may be. So, in SL25 managers’ words, they are already thinking how they will replace thier current successful format, to stay always ahead of the competition (465-467; 530-532). Consequently, what we mentioned earlier in relation to an advanced industrial sector as telecommunications also holds true in more traditional sectors as commerce: the apparently endless re-definition and diversification scaling of products and services become increasingly frequent.

While attempting to better adjust to the competitive environment, such re-definitions sometimes reach the core aspects of the organization: they involve re-defining its very essence, its mission as a firm. SM29, for example, was a toy manufacturing firm until 1994. But that year, two world leaders of the toy industry -Mattel and Hasbro - landed on the Chilean market, forcing even well established Chilean toy firms out of business. SM29 opted for diversification; it acquired the representation rights for several baby product manufacturing firms and, in the following years, it continued incorporating new representation rights for other firms along the same industrial sector. Today, the firm focuses on a totally different line than four years ago. Its trade connections, market and required knowledge have changed. **The firm’s identity itself has changed**. The firm is still the same, and, at the same time, is not the same anymore. This is an example of how identities are becoming increasingly fluid, in the field of firms, in traditional sectors of “peripheral capitalism” countries. This has some post-Modernist flavor. It can at least be stated that certain features are indicative of

phenomena associated mainly with advanced modernity. Certain practices, in this case carried out by the firms themselves, create the basis for new cultural forms where such characteristics as fluid identities are normal.

A **greater versatility** is generalized within firms, although not always with such force. The managers of a medium-sized machine tool firm (MM12), for example, define it as a manufacturing firm with Chilean engineering; but if customers request it, they are willing to purchase equipment from foreign manufacturing firms and become traders (510). MM5, another firm that used to focus on selling liquefied gas home tanks, now emphasizes delivery of several liquefied gas-related services and products. Thus, they have widened the definition of their business, claiming to be "suppliers in the liquefied gas area", which enables them to differentiate themselves from their competitors and be better prepared to react to new market opportunities (449).[21]

Re-arrangements or more substantial changes in positioning in the target market usually go hand in hand with the aspects mentioned above. For example, in view of technological changes and cost reduction of the products it was selling, a telecommunications firm (SL21) reoriented its sales towards a more massive market sector, one with lower income levels. This implied emphasis on a different type of service -less personalized-, and a different work organization and staffing (575).

Growth, domestic geographic expansion and power

For a vast majority of service-related firms, closeness to the customer is very important. So they feel the need for geographic expansion. In fact, 35.7% of the

[21] It is worth noting that considering this type of mission definition, which is at the same time more abstract, inclusive and not tied to any particular way to carry it out, corresponds to what is recommended by the current management approaches.

service-oriented firms under study included increasing their domestic geographic coverage among their strategic priorities. For some of them, this has implied opening more offices looking for the best possible locations. In the case of SL27, a retail firm that had been founded in a region away from the capital city, growth was projected in recent years to expand coverage in the capital. For others, it has implied the opposite. For example, SM28 had expanded its facilities to Valparaíso, Puerto Montt and Concepción as a way to keep close contact with its customers and therefore be able to provide them technical support, which is very important for the kind of product it sells.

This increased coverage also goes beyond the national territory, but in recent years, growth in that direction has been more limited due to the economic crisis affecting the region. Consequently, a large firm from the trade sector, which, in previous years, had expanded with a series of locations in Argentina, concentrated during the last three years on the domestic market, in view of the very poor results obtained in Argentina as a result of the crisis. The firm decided to freeze its international expansion for now.

As for several other firms with greater economic power, growth has been carried out in an accelerated way, absorbing other firms and their chains or stores instead of establishing new facilities. SL27, for instance, acquired a chain of supermarkets, with 14 stores in Santiago. In other cases, firms have carried out complex mergers. One of the firms, SL20, from the financial sector, was in such a process, which enabled it to virtually double its national coverage.

In strategic terms, growth has to do with coverage and market, but also with power and greater negotiating capabilities. A larger size and a greater volume of products handled give greater negotiating power with suppliers or customer firms. Another aspect of the competitive advantages related to size refers to cost reduction, but we shall deal with that later.

Growth may seem to be in conflict with post-Fordist trends, which imply size reduction, externalization and reconnection by means of networks. How to reconcile this with the mega mergers that have been taking place in the country, in the financial, trade, and pharmaceutical fields among others? First, we need to say that these mega mergers take place mainly among service-related firms, for which growth is equivalent to better service opportunities and contact with the customer. Second, this is a kind of growth accompanied with structural lightening: the same is done with less and less personnel. This last point deserves special attention: for post-Fordist trends lightness –in structure, personnel, and physical resources- is more important than reduced size. It is a **relative** rather than absolute concept. In this sense, one might find it arguable that large mergers do not effectively constitute a contradiction with what has been stated in post-Fordist models.

Internationalization

One aspect of the transformations this country has undergone that has been most publicized is its reorientation towards international markets: the "internationalization of Chilean firms" (Lüders, 1999), the exporting reversion of the economy (Montero, 1997: 31). This is reflected in macroeconomic figures. Between 1996 and 2001, exports of goods and services saw a 47.3% increase, while the gross domestic product only grew 16.9% (see the following table). Similarly, exports as a percentage of the GDP rose from around 11% in the early 70s to nearly 33% in the early 21st century.

TABLE III.3: EXPORTS AND GROSS DOMESTIC PRODUCT (in billion pesos backdated to 1996)

	1996	1997	1998	1999	2000	2001	Variat-ion 1996-2001 (%)
Exports of goods and services	8.520,5	9.474,8	9.970,4	10.631,4	11.428,3	12.531,2	47.3
Gross domestic product	31.237,3	33.300,7	34.376,6	34.040,6	35.533,4	36.533,0	16.9
Rate Exports / GDP	27,3	28,5	29.0	31.2	32.2	34.3	

Source: INE (2002: 193), with figures from the Central Bank of Chile. Figures from 2000 and 2001: Provisional (1 USD = 412 CLP, in 1996)

A distinctive peculiarity of this export increase is the fact that it has come hand in hand with a **product and market diversification** as well as a big increase in the number of exporting firms (see the following Table). In earlier decades, exports consisted basically of mining products, particularly copper; thus, the percentages corresponding to the mining vs. manufacturing industries in relation to total exports in 1970 were 85.5% vs. 11.6%, while in 1997 figures were far more balanced: 50.0 % vs. 40.9% (Lüders, 1999: 29). During the last few years, the exports openness coefficient (exports / GDP) has exceeded the Latin American average (situated around 24%); whereas two decades ago, this coefficient was 12%, significantly lower than the regional average (Rosales, 1998: 210, 211). Additionally, exports growth rates have exceeded world exports (Rosales, 1998: 214).

TABLE III.4: NUMBER OF EXPORTING FIRMS, NUMBER OF EXPORTED PRODUCTS AND DESTINATION MARKETS (absolute figures and variation % for the 1990-2002 period)

	1990	1996	2002	Variation 1990-2002 (%)
Exporting firms	4.100	5.840	6.118	49.2
Products exported	2.300	3.890	3.750	63.0
Destination markets	129	180	158	22.5

Source: ProChile.

This orientation towards exports is reflected in the sample of firms under study. For 22.2% of the manufacturing firms, the strategic priority was export increase, a task they had already undertaken. Others, although they were not exporting at the time and did not consider it part of their strategic goals, saw it as a possible future focus. [22]

In general, international projection is seen as the path to follow in order to access more markets and overcome the inevitable limitations of the domestic market. Consequently, it becomes a very valuable strategic tool. But it must be stressed that internationalization involves more than just exports; in other words, it involves more than just selling and buying products. In the case of Chilean firms, it implies becoming actors playing a role in the global market scene, making multiple investments abroad, establishing subsidiaries, acquiring foreign firms and building up alliances. Consequently, this is a projection that not only includes goods, but also ownership, management, structures and competences.

Out of all the firms under study, 28.1% were definitely engaged in such actions abroad, and the notion of globalization infused their strategic orientation.

[22] For the year 2002, and considering the volumes exported, the number of **large and medium** firms that actually export is estimated at 2,462, which corresponds to nearly 14% of all firms that size. If we consider only those where, given the nature of their business, exports can be perceived as a reasonable component of their activities, we may estimate that approximately 20% of them is engaged in exporting activities, that is, one out of five.

Nevertheless, the crisis of the last few years and, very importantly, the calamitous situation in Argentina, where most of them had made investments,[23] had led them to temporarily reduce this globalization boost. Instead, from the years 1998-1999 onwards, they had been more concerned with the consolidation and, in some cases, the divestiture of certain firms and offices that turned unprofitable.

b. Cost reduction.

The second major strategic focus during the last three years has been cost reduction or, as some managers like to say, the "optimization of cost structure". Half of the firms under study put this as maximum priority, with the greatest percentage corresponding to manufacturing firms.

Emphasis on cost reduction is not new -it was already a concern in the 80s- but the economic crisis has pushed it further. For several of the sampled firms, their own survival is at stake, therefore, the pressure to reduce costs is great. Even in the case of ML11, the subsidiary of a multinational, the very survival of its plant will depend on the improvements it can introduce in its productivity, thereby allowing it to remain competitive with another plant from the same firm in Latin America (Brazil) - that is, with an "internal" competitor. And if it doesn't, if it does not achieve lower costs with world-class quality, its headquarters will not hesitate to close it and derive the production to another plant in the region showing greater efficiency (494, 496). In other words, the multinational structure does not operate by protecting its firms from rivals; instead, even those crucial decisions concerning preservation or elimination largely are relied upon the market.

[23] Between 1990 and the first quarter of 2003, 50.5% of Chilean direct investments abroad had been made in Argentina, the country that concentrated the bulk of Chilean investments (Santiago Chamber of Commerce, 2003).

The general orientation is to adjust all the costs, but the prioritized attention is placed on variable costs and very especially on personnel-deriving costs. This measure is largely widespread. Some firms, however, in efforts not to lay off their employees, have opted for such measures as freezing their salaries. This is the case of a firm from the telecommunications business (SL21), one of the few to have placed great strategic emphasis on its human resources and on the instilment of new competences in its employees. This firm froze their salaries in 1999, and in 2002 they were still frozen. This and other measures had helped it minimize lay offs.

The search for cost reduction and productivity improvement guides the revision of work methods and systems and leads to the development of different organizational practices or changes -such as job polyvalence, reduction of structural levels, externalization, replacement of contractor firms with cheaper ones, logistic changes, etc.-, with which we shall deal later.

One extreme case, perhaps, in the prioritization of this goal is a food manufacturing firm (ML2), whose strategy is maintaining the cost leadership in its products. Its prices are significantly lower than those of its rivals and this has enabled it to keep an attractive market share. Its strategy consists of keeping its costs to a minimum, operating with a very reduced administrative load, with almost no professionals, and minimum investments in human resources and advertising. It may be argued that such a light organizational scheme runs the risk of leaving the firm in a weakened state prone to suffering problems in the future. However, such a strategy has enabled the firm to obtain good profits and a solid market share. This is an organization that has been subjected to an extreme, almost restricted diet, but which, given its strategic focus, is able to operate effectively. And the thinking apex that designed the strategy and concentrates the resources may, with the profits made, multiply its investments in other areas such as technology, other firms, etc. As long as people need their

job, they will accept these work conditions. As long as consumers look for low prices, the firm will retain its market.

c. Quality

Despite the fact that, in their public discourse, firms often place a special emphasis on quality, only 28.1% of them -especially service-oriented firms- mention it as a strategic priority.

With regard to manufacturing firms, those that export their production are the most concerned with quality. Access to foreign markets and the search for new ones -particularly in Europe and the U.S.- binds them to make their quality standards stricter. Servicing foreign markets has led them to become or try to become ISO 9000 certified, with various organizational consequences, as we will discuss later on.

d. Secondary strategic goals

Other strategic focuses are not included in the corporate priorities, with the exception of a very reduced number of firms (less than 15%). Such is the situation of Human Resource development. Currently, most firms do not consider their human resources as a core strategic issue. This is the case even in some firms that are taking steps oriented to training and developing their employees. However, the few firms that consider their human resources a strategic priority are well aware that they are developing a competitive advantage through their people, and have various procedures in place for their training and for a better utilization of their knowledge and experience (for example: SL25, SL21, ML16).

Technological development is another secondary strategic goal. We have already said that its low strategic relevance may come as a result of the fact that,

as technological applications spread out, they don't continue being a competitive advantage. This does not necessarily imply that firms are not concerned about the incorporation of technology to productive and service supply processes as well as management. On the contrary, they are definitely concerned and therefore they are making significant investments in that respect, which they see as a necessity to remain at least at their competitors' level.

Resorting to strategic alliances or other network forms is, on the other hand, a procedure that is being incorporated more and more into firm strategy, but it is still not widely discussed within the firm itself: Managers do more than what they say and deliberate in this respect, and some of those actions are being taken, even more, at Board or owner level rather than at management level.

Such aspects as **"Social Responsibility"** are virtually absent in any manager's strategy description. Only one manager (SL20) - when he was about to end his comments about strategy - remembered the subject and cited its relevance for the firm's public valuation (413).

In managers' discourse about firm strategy, practically nothing is said about flexibility and only one firm mentioned the flexibilization of its production or internal processes as being part of its priorities. Nevertheless, as we will see later, flexibilization is one of the most relevant outcomes that emerge from many of the new practices. This may be a case of dissociated consciousness, reflecting a lack of organizational discussion or thinking or a dominance of other management discourses that address the issue under other denominations. Anyway, this is not something that we may resolve here.

1.5. Conclusions about strategy

In general terms, one focus of our analysis is to visualize the firm's configuration, which appears behind the details. The largest typification that will serve as a background of reference refers to the difference between a Fordist and a post-Fordist firm. So, what did our findings reveal?

Firstly, associated with the radical changes occurred in the country and the world, as well as with the rise in environmental dynamics and complexity, Chilean firms have clearly changed the way they see their environment and have consequently changed their internal emphasis. On the one hand, **organizational attention is largely focused on the firm's environment,** on the market and its customers, and, on the other, the firm's areas in charge of external relations have become more important.

Secondly, firm **identity** becomes more **fluid.** Core aspects of its being, such as its mission or ownership composition, are subject to faster-paced changes and are part of the firm's strategic definitions.

Thirdly, Chilean firms that until the 1970s operated almost exclusively in the domestic market have now adopted a definite **international orientation**. The frontiers of their market have become flexible and are now increasingly experiencing a continuous change. In turn, globalization has not only occurred in the exports arena but also in structural extensions as well – with subsidiaries, offices, managers and know-how employed in other countries. Initially, such fluid extension started toward neighboring or nearby countries, but it is gradually spreading out beyond. The recent free trade agreements with Europe and the U.S. show that such a trend is poised to become more and more intense.

These three characteristics are indicative of a type of strategic approach and organizational view that differ from those of a typical Fordist firm of the protected imports substitution industrialization period. They show a firm with an identity that is much more fluid, market-focused and with an increasingly global view.

The fact that such changes are sufficiently generalized throughout the world and that they are now becoming “evident” features may lead us to disregard them when defining the characteristics of domestic firms. On the contrary, we believe that such features should be highlighted for determining the profile of Chilean firm’s current organizational form and the direction these changes are oriented to.

The cost reduction issue might be understood as a factor that leads to the lightening that such approaches as Lean Production intend to achieve, but it would not allow us to make such a connection if considered separately. We must further explore into the respective practices and types of ensuing measures to attempt a more precise categorization in that respect.

The same, but in an opposite direction, may be said about the little relevance, granted among strategic priorities, to human resources and networks development. Further research will be needed for us to be able to affirm that such an absence at the strategy level reflects the prevalence of Fordist features (or the absence of post-Fordist features). Therefore, we will address and discuss these issues later in this text.

2. Organizational structure

After strategy, the second level we will consider refers to the organizational structure, which contains the criteria that guide and stabilize the behavior of its members, and allow for the coordination, in one way or another, of the multiplicity of actions that take place within a firm. Some strategic redefinitions have entailed significant repercussions in the firm's structure, but some structural changes have a different origin, and there is also a fair degree of structural tightness.

But, initially, we must make a conceptual clarification. The **notion of "structure"** often includes dimensions such as authority distribution, task distribution and specialization, formalization, control areas, and department division criteria. Mintzberg (1979, 1989), in his already classic works, has also included planning and control systems, lateral connection mechanisms, as well as cognitive and normative schema and criteria. All these procedures allow to transit from a set of disordered actions to a set of actions organized in a certain way, in the frame of the organizational borders of meaning and in the instrumental perspective of the organizational goals to be achieved. From the combinations between the various structural characteristics firms tend to adopt in front of determined environmental conditions, Mintzberg derives five structural configurations (simple structure, machine bureaucracy, professional bureaucracy, divisionalized form and adhocracy). A sixth structural configuration is later added to the aforementioned: the missionary organization. In order to achieve this synthesis, the author reviewed hundreds of empirical research studies and then integrated the results parsimoniously in such a way that it became, after Weber's famous work on bureaucracy, the best typology -in terms of conceptual clarity and apprehension of organizations' empirical characteristics in the new historical period. But just as Weber's work was appropriate to understand organizations at the beginning of the 20th century, Mintzberg's work is appropriate for the organizations since mid

century to the beginning of the 80s, though it does not entirely grasp the new complexity that emerged in the 80s and that stands out at the beginning of the 21st century. In this new organizational context, inter-firm links acquire an all-new relevance. This happens both in ownership connections that become increasingly sophisticated and in other connections, which are not based on ownership relations at all, but that become equally relevant.

Somebody may object that an inter-firm alliance, or a sub-contracting relationship, be considered a structural component of a firm, because they are out of the traditional limits of what is understood by the term “firm”, where such limits are defined by the criterion of ownership, which, in turn, determines the jurisdictional scope where the firm’s hierarchical authority applies. On the contrary, if we assert that the limits of an organization are borders of meaning rather than ownership borders, and we understand the structure as a set of mechanisms that direct and stabilize the behavior of a variety of actors, in instrumental actions directed towards deliberate collective purposes, so as to co-ordinate them, then the structure will also include such ties as those present in strategic alliances, subcontracts, etc. -to the extent that such ties go beyond the mere coordination through price, inherent to the market.

Therefore, following this last statement, when we refer to a structure here, we will also refer to connections that go beyond ownership limits.

Thus, the first structural level that we will address will refer to **inter-firm relationships**, including ownership ties as well as other coordinating modalities. Similarly, we will address the structural transformations associated to the growth of national and international coverage.

In a second level, we will address some aspects of the **internal structure** that are particularly relevant. Among them, we will discuss the changes related to lateral connections, department formation and decentralization.

2.1. Inter-firm relationships and growth

First, we will consider inter-firm **ownership** ties. In this matter, Mintzberg's attention is focused on the modalities assumed by multinational firms or holdings. There are, however, other ownership ties - like stock links, interlocking directorates, and articulations with economic groups - that do not fit with those configurations. Anyway, what we want to highlight is that a first structure level refers to **inter-firm ownership and control ties.** This level is of utmost importance, for the changes occurring therein may result in decisive effects to the rest of the structural components and for the firms involved, including collective layoffs, units eliminations, mergers, etc.

Second, we shall address the issue of **inter-firm alliances**, which not involve the ownership criterion. Reference should also be made here to subcontracting networks, which belong to this level, but we will address them in Chapter IV.

The following table shows a firm's engagement at this level of changes.

TABLE III.5: CHANGES IN ORGANIZATIONAL STRUCTURE (1): INTER-FIRM RELATIONSHIPS AND GROWTH (% of firms that have realized each change)

CHANGES IN ORGANIZATIONAL STRUCTURE	Appl. Period		INDUSTRIAL SECTOR		SIZE	
		TOTAL (%)	Manu-facturing (%)	Services (%)	Medium (%)	Large (%)
Change in ownership relations	Since 1990 approx. (*)	66.7	61.2	75.0	60.0	73.3
	Last 3 years only	6.7	5.6	8.3	13.3	0
Mergers with other firms	Since 1990 approx.	14.1	14.3	14.3	12.6	16.6
	Last 3 years only	7.1	14.3	0	6.3	8.3
Acquisition of other firms	Since 1990 approx.	41.9	27.8	61.5	31.3	53.3
	Last 3 years only	3.2	0	7.7	6.3	0
Opening of new branch offices or subsidiaries abroad	Since 1990 approx.	33.4	31.3	35.7	26.6	40.0
	Last 3 years only	6.7	6.3	7.1	13.3	0
Opening of new branch offices or subsidiaries locally	Since 1990 approx.	46.2	23.1	69.2	35.7	58.3
	Last 3 years only	7.7	7.7	7.7	14.3	0
Consolidation of strategic alliances or joint ventures	Since 1990 approx.	66.7	50.1	85.7	60.0	73.4
	Last 3 years only	40.0	31.3	50.0	53.3	26.7
License Purchasing	Since 1990 approx.	-	-	30.8	-	-
	Last 3 years only			0		

(*) Note: "Since 1990 approx." includes changes carried out in the recent three years **plus** those performed in previous years, particularly in the last 10 years, approximately since 1990.

Ownership

Results show that ownership status is particularly dynamic and fluid. The firms studied have undergone a steady process of change in ownership, as they have acquired firms, incorporated new partners, linked themselves to foreign capital, split ownership or merged the firm. It seems noteworthy that two-thirds of the

firms have implemented some of these changes in the last decade and 46.7% have been carrying them out in the course of the last three years. Furthermore, some of them have implemented several of these changes, in a process of successive articulations and re-articulations intended to offer a substantial response to the strategic orientations defined by the organization top executives when faced with the opportunities and threats of a changing environment. Even without precise comparison data, it may be stated that this situation is in stark contrast to the sounder ownership stability that prevailed during the imports substitution industrialization period. This fluidity might be called very typically post-Fordist.

A large firm from the food industry (ML3) is a clear example of this ownership fluidity and its use as a privileged strategic tool.

In 1994, ML3 entered the U.S. market by means of a firm (ML3 North America Inc.) established to sell and distribute its products directly in the United States. The next year, they opened a production plant in Peru for the production of one line of the firm's products (cookies and cake mixes). In 1997, it acquired a Peruvian firm that produces another one of ML3's core lines (pasta, flour and semolina). One year later, both firms were merged. In 1999, a South African firm joined the holding through the purchase of 24% of the capital. These funds cleared the way for ML3 to buy a large Chilean firm that led a line of food products that it did not produce at that time. Almost simultaneously, it bought almost 100% of an Argentinean holding that controlled 96% of a firm that produced many of the products commercialized by ML3 (coffee, chocolate, cookies) (2000-2007).

Thus, the different firm purchases and mergers as well as the sales of part of the capital stock have been the basic line followed by this firm to diversify its products, increase its market share and internationalize the firm. As a result, the

firm has gained a leading position in its market, becoming one of the largest and most relevant food holdings in Latin America.

This dynamics works in other large firms along similar lines. In some cases, the changes involve separation from certain areas which become new firms, but keeping their ownership (unlike the typical outsourcing process whereby firms with other owners are subcontracted to carry out the processes and activities). The manager of a large manufacturing firm, also from the food industry (ML9), explained that the progressive inclusion of subsidiaries had been quite a significant change in the last few years: for example, a carrier in charge of the distribution of firm products and a packaging firm were established (2035-2042).

Even though these changes have been led by large firms, they also occur in medium-sized firms at a growing rate, according to our figures. In these firms, ownership shifts are less complex, but not necessarily less relevant. The case of SM29, a medium-sized firm, is illustrative. In recent years, it separated the ownership of two organizational units. On the one hand, there is a wholesale store and, on the other, a firm that manages a set of direct sales stores. In addition, it established a promotions and merchandising firm in partnership with a firm dedicated to that business. SM29 owns 35% of the new firm, being therefore investor and customer at the same time. Also, when interviewed, its Operations Manager said that they plan to continue buying firms (2120-2123).

These results coincide with trends detected at an aggregated level along the country. Investigations on ownership structure show a **high concentration** that has been on the increase. In April 1997, the 40 firms with greatest stock transactions possessed an equity capital at the Stock Exchange equivalent to 60% of the Gross National Product (Fazio, 1997: 10). On the other hand, based upon estimates by Fuentes (1997: 91), almost 60% of the stock capital would be

controlled by 15 domestic business groups.[24] Through a comparative study, this same author concludes that "firm ownership in Chile is more concentrated than in Japanese and German firms, and much more than in British and American firms" (Fuentes, 1997: 137).

At the same time, the presence of **foreign capital** has increased. During the 90s, "the country has been one of the largest receivers of foreign investment in the region. In 1993, The New York Times rated it top two, second only to Mexico" (Fazio, 2000: 16). The table below shows the significant increase of foreign investment in Chile during the last decade. By the end of 2000, more than four thousand firms from 64 countries had investments in the country (Foreign Investments Committee, 2001). During the first decade of the 21st century, this investment is expected to remain significant, as the recently signed Free Trade Agreements with the EU and the US have come to supplement the other agreements that Chile has established with other markets such as Mexico, Canada and Central America, as well as the various economic complementation agreements in force with other South American countries. As stated by Karen Poniachick, Vice President of the Foreign Investment Committee, this had made that "several [foreign] firms placed their bet on increasing their share in Chile, or simply on investing for the first time, to take advantage of the Free Trade Agreements and transform our country into a launching platform for their exports". Thus, in 2002 only, 21 foreign transnational firms had opened management or production centers in Chile as a means of taking advantage of these new commercial agreements. [25]

[24] Another indicator of the increasing concentration is the fact that, considering "the 317 corporations registered in the Stock Exchange by mid 1999, nearly 74% of the stock capital was in the hands of the ten largest shareholders of each one of them. At the beginning of the decade, such rate was 44%" (Fazio, 2000: 63).

[25] Among them, we can mention AT&T's technological center for Latin America; Hewlett Packard's support center for the region; Motorola's software development center; Packard Bell's assembly plant; Unilever Bestfoods, that will move its food administration area from New Jersey to Santiago; Dutch multinational Akzo Nobel, which decided to establish its pharmaceutical

TABLE III.6 TOTAL MATERIALIZED DIRECT FOREIGN INVESTMENT – Investment materialized under the Foreign Investment Code and Capital Receipt of Chapter XIV (in million USD)

	Foreign Investment Amount (in USD millions)
1974-1989 *	5,111
1990	1,350
1991	1,076
1992	1,157
1993	1,938
1994	2,932
1995	3,450
1996	5,264
1997	6,150
1998	6,512
1999	9,774
2000	3,713
2001	5,623
2002	3,768

Source: Foreign Investment Committee (2003)

(*)Note: Excluding contributions Chapter XIV

As the above listed figures indicate, direct foreign investment oriented towards the productive sector,[26] which encompasses ownership and management of the activities where it applies, has increased tremendously in the 90s, very much unlike the situation experienced in the preceding government regime period

operating center for the Americas, the Middle East and Africa in Chile (El Mercurio, 16 December, 2002; El Mercurio, 25 September, 2003).

[26] In all the industrial sectors (manufacturing, mining, services, etc.).

(1974-1989).[27] Thus, Fazio, who has carried out detailed investigative research on the course given to foreign investments and the changes in corporate ownership, concludes that "in the last years of the 90s, one core feature was an increased presence of transnational capitals" (Fazio, 2000: 59). As a demonstration of this, by the end of 1999, "in eight of the twelve corporations with the largest stock equity, foreign capitals had a dominant or very significant share". In turn, "in the IPSA [from the acronym in Spanish, Stock Selective Price Index], composed of the 40 most quoted firms in the Stock Exchange, the percentage of firms controlled by foreign capitals, backdated to October of the same year, was 77%, and in the IGPA [from the acronym in Spanish, Stock Prices General Index], this percentage was 41%. In 1992, these percentages were 17% and 20%, respectively " (Fazio, 2000: 62,63).[28]

Anyway, this increase in foreign capital reception has become a general rule across the region, though in diverse degrees. Thus, for example, in the case of a neighbor country, Argentina, when the 200 sales leading firms were analyzed utilizing data from 1999, it emerged that firms with foreign capital generated 69.7% of the sales and represented 65.5% of that set of firms, while in 1994, in both cases, they only accounted for approximately 30% (Fazio, 2000:45).

At the micro level addressed in this research, such trends also become evident. Several firms appear as a part of ownership and control networks depending upon holdings and economic groups. Many of them had also been acquired whether partially or totally by foreign firms over the last few years. The following table summarizes the ownership relation status of these firms.

[27] According to UNCTAD'S World Investment Report, Chile is among the 20 best performing countries in terms of foreign investment attraction, in spite of the severe drop in direct investment experienced in recent years (Weekly Economic Report, Santiago Chamber of Commerce, September 8, 2003).

[28] Fazio's research (1997, 2000) shows the ownership networks of the different groups in detail and their growing concentration, combined with foreign capital.

TABLE III.7: OWNERSHIP RELATION IN WHICH FIRMS ARE INSERTED (% of firms)

OWNERSHIP RELATION	% of firms
Foreign multinational-dependent	25.0
Member of a domestic holding and /or economic group (*)	34.4
Owners possess other firms (more than five)	6.3
Owners possess other firms (from three to five)	15.6
Independent firm and owners possess this firm only	18.8
	100.0 (32)

(*) Note: Foreign multinational dependent-firms were not considered in this second category.

59.4% of firms were **part of national or international ownership networks.** Even though our sampling does not allow for statistical generalization, it certainly has an appropriate qualitative representativeness. Consequently, this ownership relation is indicative of what is happening in our country in large and medium-sized firms. Also, it should be noted that such ownership relation seems to have **reproduced itself "downwards"** as it has spread to firms of lesser economic importance. In the same way as there are large groups with increasing economic power, ownership networks with narrower scope and less power have developed too. For instance, 15.6% of the firms surveyed were part of **small networks**, made up of three to five firms. And they all (except for one, ML16) were medium-sized firms. In general, these small networks were of recent formation or growth, so we may well assume that this is a generalization or extension of the logics of ownership networks which is more and more intensively practiced by core firms.

Domestic and international growth

As evidenced by the data contained in Table III.5, acquisition of other firms in the last decade has acted as an important and outstanding mechanism to achieve an organization's expansion. It is used by 41.9% of firms, principally by large firms but by medium-sized firms as well. And, of course, even though the scale of acquisitions may be different, the use of this procedure by medium-sized firms is to be noted. Managers in them mentioned such a mechanism as being part of the set of tools they commonly use. The advantages of this fast growth track are particularly important for service-oriented firms, due to their need to be close to their customers; acquisitions allow firms to quickly expand their geographical coverage and access new market segments.

As mentioned earlier, internationalization has been a distinctive feature of the strategy of firms in the 90s; and such internationalization becomes manifest in the opening of new branch offices and subsidiaries abroad, as has been the case in 33.4% of the cases under study. This is basically carried out in large firms, but medium-sized firms have also made inroads into this mechanism with encouraging results.

As already evidenced in the case of ML3, in addition to the establishment of offices abroad, international expansion operated through firm acquisition, mergers and alliances. ML3 is a large firm but, as we can see, such processes are also taking place in medium-sized firms, although to a lesser degree. A couple of illustrative cases of what these firms have done are MM8, a manufacturing firm, and SM26, a service-oriented firm.

The case of a medium-sized manufacturing firm

Since 1998, MM8 has a distribution center in Argentina (MM8 - Atlántica), managed by Argentinean staff only. According to the description made by its Technical Manager: "[that] center distributes our products; they place orders with us and distribute them to different vendors; they look for their own customers. There is one manager in charge of making contacts, distributing, placing the orders with us, making payments, receiving, organizing cash flows and in general, managing the firm there. (...) Additionally, they may re-distribute products. We buy some products from China and Japan, which we send to them for their distribution. But they can also negotiate with other firms. They buy from large firms and distribute. They are like small Homecenters, but selling MM8 products and some additional products".

They also have an office in Mexico, which opened after Argentina's with "quite positive results". In this case, the manager in charge is from Chile, and so is the warehouse staff "because we have had problems with Mexican staff" (614-615).

A first attempt at opening offices in Brazil failed, but the firm has not discarded that option yet; it has only been postponed as they wait for changes in the prevailing conditions.

The case of a medium-sized service-oriented firm

SM26´s international growth is more complex. At present, it is part of a "consortium" with associated firms in Peru, Bolivia, Uruguay, Paraguay and Brazil, in addition to the headquarters in Chile. Each associated firm is staffed with approximately 15 employees. In order to commercialize the

products they sell and to negotiate representations, they operate under a matrix structure where the operational managers of a given type of product in a foreign country report both to the local general manager and to the manager that handles that specific line of products in Chile. Thus, these commercial operators depend upon both of them simultaneously, and therefore need to conciliate their points of view.

SM26's international expansion originated in the early 90s, but has spread out in time, thereby involving changes in the management mode as well. When interviewed, the Administration and Finance Manager said that a radical change introduced between 1999 and 2000 was to establish a system whereby the two key managerial positions were distributed between one Chilean professional and one local professional. This was thought as a control method that would also prevent the problems that were taking place, which he described as "problems of trust": "[local managers] were entrusted but they failed to respond to that trust. Instead, they tried to make business on their own, much to the firm's detriment. Such a situation led us to become suspicious of certain things and exercise more caution." Consequently, they set such a balance as a control system and they believe it is working properly (712, 730).

One peculiarity of this international growth, however, is the fact that it has been greatly focused on **neighboring countries**. Between 1990 and the first quarter of 2003, 90.5% of all Chilean capital investments across the globe were concentrated in six South American countries: Argentina, Brazil, Peru, Colombia, Venezuela and Bolivia (Santiago Chamber of Commerce, 2003).[29] Even though investments in Argentina and Brazil have been considerably reduced in recent

[29] That 90.5% was distributed as follows: Argentina, 50.5%; Brazil, 14.9%; Peru, 13.9%; Colombia, 5.1%; Venezuela, 4.7% and Bolivia, 1.4% (Santiago Chamber of Commerce, Economic Report, May 12, 2003).

years as a consequence of the economic turmoil in those countries, South America remains by far the preferred destination for Chilean investments.

This shows that, although Chilean firms have ventured abroad, they have preferred not to go too far. As Gabriel Rodríguez -Chilean commercial attaché in Mexico- stated, “Chileans have traditionally preferred not to invest in places they cannot reach quickly” (El Mercurio, September 17, 2002). What may be the reason for that? Firstly, the **trust issue**. In the two aforementioned cases, trust seemed to be an obstacle that led them to take their own Chilean managers. This trust issue causes difficulties in various areas. We will see it re-appear later, thus becoming a serious limitation to the development of a networks logics.

One additional factor, mentioned by Lüders (1999), convincing firms not to move too far from the country are the environmental similarities managers find in such countries, meaning by that the country’s general institutional environment as well as corporate cultures. This implies that, as part of their internalization or “globalization” process, Chilean firms consistently experience problems with the “deterritorialization” process; they’d rather be close to home, in a socio-cultural environment as similar to their own as it can possibly be. One might then imagine that, in spite of the qualitative difference vis-à-vis the closed economy that dominated the scene until the early 70s, and the decisive opening to the world, Chilean firms are still living only an initial phase in the development of global thinking. The sense of uprootedness that might be understood as an attribute of a typically post-Fordist firm is not a dominant feature in them.

In a post-Fordist paradigm, globalization relates to a significant degree of deterritorialization. The most radical and prototypical manifestation are “virtual firms”, capable of deploying themselves across the globe, displacing facilities in view of their more favorable wages, political, legal or any other conditions. These disanchored firms, whose most stable feature is the strategic and investor center,

constitute a defined organizational analogy of the so-called “postmodern” cultural transformations. There is a remarkable fine-tuning or sense of affinity among such organizational and cultural forms. If we place Chilean firms in that perspective, we will have to conclude that they are very far from perceiving and organizing themselves in such a way.

Furthermore, this international growth is in a waiting period that may eventually experience a subsequent inflexion. The greatest growth took place in the mid 90s, as the table below shows. Since 1998, and as a result of the economic crisis, firms’ actions abroad have become more cautious. Most of the firms in our sample that were implementing them have redirected their efforts in order to consolidate what they already had or, in some cases, to partially withdraw in response to the existing difficulties: many of them have liquidated other firms of their own or have closed offices. As an indication of how serious the situation has been, certain economists estimate the total losses for Chilean firms deriving from the collapse of the Argentine economy in at least USD one billion (El Mercurio, 17 September, 2002). As mentioned in a study prepared by the Santiago Chamber of Commerce (2000), “some Chilean firms decided [in that context] to re-evaluate their investments abroad, particularly those which appeared to be less profitable, and decided to sell assets for a total of USD 523 million in 1999 and USD 251 million in the first six months of 2000.”

TABLE III.8 CHILEAN INVESTMENT ABROAD (in millions of dollars for each year)

	Investment (in USD millions)
1990	16
1991	192
1992	671
1993	742
1994	2,795
1995	4,158
1996	6,368
1997	4,731
1998	2,244
1999	1,417
2000	1,210
2001	1,347
2002	769

Source: Chilean Bureau of International Economic Relations (Dirección General de Relaciones Económicas Internacionales, Dirección de Estudios).

In conjunction with that withdrawal, a greater emphasis was placed on local market investment. On the other hand, increasing numbers of foreign competitors -especially Spanish and U.S. groups- entered the region and took advantage of the favorable financial conditions in the developed world (Santiago Chamber of Commerce, 2000). Thus, a new scenario is being formed in which international expansion would include a greater process of interconnection and alliances between national and foreign capital (Fazio, 2000).

In any case, Chilean investment abroad may not be a sufficient indicator of the level of globalization reached by Chilean firms. Some of them have developed broad international networks, whose relevance surpasses that of the capital used to establish these networks. An interesting case, which typifies a Chilean firm that clearly conceives itself as a global firm and operates worldwide, is the large manufacturer ML18.

This firm has commercial branches in Argentina, Perú and Colombia, in addition to a joint venture in Germany. In recent years, it closed its offices in Brazil and

Venezuela, for the already stated reasons of the crisis. However, it still maintains its commercial contacts in these countries and in the years to come could restart the process of opening new offices. These international units are coordinated by Ilko International, which is an independent firm with its own legal structure and management, but physically operating inside of ML18 installations. Apart from manufacturing carried out in its Chilean facilities, the firm has offices in Hong Kong (ML18-Hong Kong) and through them products are bought from Taiwanese or Chinese firms that act as *maquiladoras* for the Chilean firm. The product design is sent from Chile to be made abroad. The production manager explains the process, ”You send them the design, you tell them ‘I want this [product], with these characteristics and I want a million per year’. Then ML18-Hong Kong starts looking there among the thousands of production plants until they find the Chinese plant that fulfills the requirements regarding price, quality and everything…and they send samples here. Here the product is evaluated and the commercial area analyze prices and decide whether to buy the product from them or us.” What they have here is a **global production chain**, commanded from Chile with production in China and Chile and distribution and sales in South and North America, including the U.S. It is similar to the “global commodity chains” studied by authors like Gereffi basically in reference to industrially advanced countries. This form of global production chains is thus in full use in this country and the various free trade agreements approved in recent years could extend its use, thereby Chile would be moving first than other countries with less advantageous situations for international commerce.

In this form of structuring, **hierarchy and market combination** also play an important role. The productive units, which are part of or associated with the same firm, compete among themselves - Chile vs. China and Taiwan. The market is the mechanism that coordinates the majority of production operations among these units. The products that are being brought from Asia compete with those produced locally and management determines, from market to market,

which product to commercialize. Thus for example, ML18' Production Manager said, "recently we have been favored in Mexico because of a free trade agreement. The cost of Asian products is a lot lower than ours, but the tariff imposed when they enter Mexico is 30%. Our products, however, have a higher production cost, but in the end are 20% cheaper than those produced in Asia. In a good number of countries such as Colombia or Argentina the same thing is happening (…)" (651-654). This is a structural feature that is shared by economic groups, holdings and multinationals (previously we discussed the case of ML11, part of a multinational). The **market operates within the structure**. The market and hierarchal structure mix in the coordination process.

In the case of this firm (ML18), which has established a global production chain, **information technology** facilitates communication and coordination among the different units that are dispersed internationally. "I receive 20 or 30 e-mails daily" says the Production Manager, "from different branches, be it for products that are being tested, that they want to incorporate some new product (…), [that they want I ship them something or remove something]. (…) The system is very complex, but it works like clockwork".

Additionally, in its national organization, this firm has ownership links with two firms that are relative to its activities. On one hand, with a firm, which provides the basic raw materials for its production process and whose General Manager is simultaneously ML18's Manufacturing Manager. As an executive at the latter firm said, "My boss is [at the same time] my supplier". On the other hand, the owners of this group of firms also possess another firm, a trader.

This point reiterates and ratifies the pattern mentioned before. In the networks of Chilean firms, the main mechanism used for their construction is ownership. On the other hand, it is striking the precariousness of trust and the weak development of other forms of networks at a national level.

While international growth has remained relatively stagnant during the last four years, national expansion has been maintained. In some cases with even more strength, after abandoning momentarily investment abroad. This is the case of a supermarket chain (SL25) that in recent times has been growing at a rate of seven or eight new stores per year. As we have reiterated, this growth is particularly relevant and present in the field of services, where firms need approaching clients. This means installing new units in regions or in parts of cities with greater population density and an attractive market potential. In some cases, this growth has also been associated with diversification: the development of stores that differentiate themselves in terms of services provided, looking to adapt to the preferences of specific market segments. This is also the case of a medium-sized trader (SM26) that merged with M..., whose commercialization areas broadened and complemented those that SM26 already had. In this way, the firm was able to achieve a rapid increase in the variety of offered products (732).

Strategic Alliances

Since the beginning of the 1980s, forms of **collaboration among firms** have multiplied with a strong growth of “strategic alliances” and similar forms of collaboration. Paradoxically, this collaboration has come from the intensification of competition and it is a factor that makes this even stronger.

“Strategic alliances” are formal collaboration agreements between two or more firms attempting to respond to the challenges and strategic opportunities through complementing their resources and knowledge, and looking for synergy among the firms involved. These agreements are made with specific goals in mind that are usually short or medium term. However, these agreements can be prolonged or broadened according to the results obtained and the variation in

circumstances. Alliances can aim at developing new products, new forms of cross distribution, access to markets, joint manufacturing, technological exchange and know how, etc.[30]

Central themes to alliances are knowledge complementation and synergy of the firms involved, the transfer of tacit knowledge and the development of organizational learning based on the varied experiences and competences of the different firms. The fact that the areas where alliances have proliferated quickly and very dynamically are those of information technology, communications and biotechnology is a clear illustration.

Trust is a very important element in the development and success of alliances. Given the complexity of interaction, and owing to the fact that alliances do not have procedures that are normally associated to ownership and hierarchic control, and that it is not feasible to formalize all the complicated aspects involved, it is necessary to cement relations founding them on trust. Different authors (Child and Faulkner, 1998; Powell and Smith-Doerr, 1994) agree that it is necessary to give trust a central role in the coordination of these collaborative entities. Of course, these relationships are complemented by written agreements, contracts and protocols and eventually some crossed stock ownership. However, what allows the cultivation and empowerment of these links is trust and the development of a communication facilitating the alliance to solidify.

The magnitude of alliance development has produced, at least in advanced capitalist countries, the formation of "**constellations**" of firms that create a sort of **"collective competition**" (Gomes-Casseres, 1996) among these new entities, whose links are relatively loose and variable and represent a **new form of**

[30] In terms of concepts, we could generally speak of ways of organizational coordination based on **cooperative strategies**. This would include strategic alliances, joint ventures, franchises, and other similar modalities. We have opted here to favor the term "strategic alliance", and included joint ventures and franchises within this term.

structural configuration, which is neither hierarchical nor proprietary. In these inter-firm configurations, in these constellations, we can see one of the new organizational units typical of the new post-Fordist paradigm: units which are extremely malleable, guided basically by the strategic opportunities that they detect, and that move fluidly, in their operations, across traditional boundaries.

In the case of Chile, there is not enough information collected about alliances, but the information at hand allows us to see that they have started to spread in the country. For example the Foreign Investment Committee (1999), basing itself on a review of the press, registered that there had been 81 strategic alliances formed with foreign firms toward the end of 1998, in a wide variety of areas and with various firms maintaining several alliances simultaneously. These alliances have been fundamentally formed by large firms that warrant mention in the press. Therefore, we may well think that such a register underrepresents the advance of alliances in Chile, particularly alliances among smaller firms. Additionally, when it comes to national alliances there are still no studies that examine their magnitude.

Our study allows for a more in-depth probe into the subject. In the firms under study, together with changes in ownership relation, strategic alliances constitute the other great structural change that has been dominant (66.7% of firms have become involved in some of these collaborative forms). This is a recent change that the majority of firms have only implemented in the last few years.

That idea of complementation among firms' competencies and resources opens thousands of opportunities. Success depends to a large degree on the creativity, flexibility and willingness to assume the eventual risks involved in a kind of coordination that is not ruled by the traditional criteria of either hierarchy or ownership.

The studied firms used alliances as much for international complementation as for national concerns and for different specific ends. Some of the uses **international alliances** have been put to are listed in the following examples:

- ML3 (large manufacturing firm) had an alliance with an Argentine firm (Bona Fide) to distribute ML3 products in Argentina. It also had an alliance with an Argentine olive oil firm (Matarazzo), to distribute some of its products that ML3 did not possess in Chile. In both of these cases, the firms are using the distribution and commercialization networks of the other (839).

- MM15, a medium-sized manufacturing firm, has allied itself with an Argentine competitor, to join forces in the effort to enter large markets. Its Technical Manager says, ”We therefore make a more interesting volume and we look after our price more and that has been good. It has given us very good results. We have been able to sell to some giants who before only looked at the U.S., Canada and Europe. Venezuela, for example, was a very interesting market for us. We could not get in for years and today it is the most important market we have” (845).

As far as national collaborations are concerned, the use of alliances has been more widespread in the Service Sector. Apparently, it has been easier to create and design complementation and synergy among the services provided by different firms and, on the other hand, they have tended to be more publicly visible, which stimulates imitation. One supermarket firm (SL27), for example, has established various alliances and is a case that deserves to be mentioned.

> One of its alliances is with a chain of pharmacies. Under the conditions of the alliance, the pharmacies are located in a space within the supermarket’s installations, which gives them attractive access to potential

customers. The supermarket, for its part, enriches the services and products it offers to its clients. This, in fact, is a practice that rapidly has extended and has been adopted by different supermarket chains.

Since the years 2000 and 2001 respectively, it has been allied with two department stores that allow their credit cards to be used in this supermarket chain. For the latter firms, this has meant an increase in the use of their cards; for SL27 it is an improvement in its service, with a financial bonus, and it implies the possibility to attract new customers.

A third important alliance is with a major national bank. SL27 unified all the ATMs within its supermarkets in such a way that all belong to this bank. Thus, of the 700 ATMs that this bank has in the country, approximately 100 can be found in SL27.

A fourth alliance is with an administrator of bill paying. In 2001, SL27 had 39 of these payment offices located inside its stores, and they had increased to 51 in 2002. In such a way, approximately a third of the payment offices are located in SL27 supermarkets. Thus, those who use the services of the payment offices know that they can combine this action with their shopping at the supermarket.

In all of these examples, the reciprocal usefulness for the firms becomes clear. They show the alliance's potential to enrich the services delivered to the customer, to contribute to the distinctiveness of the service and to strengthen competitive advantages of the respective firms. Furthermore, in the above mentioned examples we are dealing with leading brands, which, through these alliances, consolidate their leadership position in the market.

Joint ventures can also be included within the collaborative forms of strategic alliances among firms. A joint venture usually involves the creation of a new legally separated firm, in which the partners of the alliance usually share ownership, at least initially. This implies a greater stabilization of the relationship, with more formal control procedures. Other forms of alliance that do not take the form of a new organizational or legal entity are more flexible and the basis of the link, as well as the coordination mechanisms, are more diffuse and more dynamic (Child & Faulkner, 1998).

Regarding this, some of the studied firms had also developed joint ventures with foreign firms to develop production abroad (ML18 with Cromefa, for production in Germany; ML7with Matsushita).

Franchises are another form of collaborative inter-firm connection. Through this agreement, a firm develops its business under a prestigious brand name, be it domestic or international. For firms that acquire franchises, business risks are reduced and the franchise assures them counting with business orientation and support. For the firm that gives the franchise, this is a way of growing. In Chile, this is still an emerging form, although new initiatives, both domestic and international have slowly been adding up. According to figures released by Publimark (2001), in Chile there were 84 franchisers, 465 franchised stores and twelve thousand direct jobs in them. As a comparative reference, in Brazil, a country with higher growth in the area, there are 750 franchisers and over sixty thousand franchised stores directly employing eight hundred thousand people. Mexico has 350 franchisers and 20 thousand franchised stores directly employing three hundred thousand people. In Chile half of the franchises are domestic,

covering manufacturing as well as services (food, clothing, shoes, education, health, hotels, etc.) [31]

Two of the studied firms (MM5 and ML16) although they had not established alliances, they did maintain connections with foreign firms, with whom they exchanged mutual visits and knowledge. This could one day become a more substantive and systematic link. They seem to be taking their first exploratory steps towards collaboration.

A typical way of operating for alliances around the world is **at the service of innovation**, to develop new products or for technological development. This is why strategic alliances proliferate in advanced technology areas such as software, communication technology products, computers and biotechnology (Gomes-Casseres, 1996) and those alliances are typically interconnected with universities and research centers. This function of alliances was absent from the sample of firms under study. Also, the connections with universities were very scarce - just a couple of cases - and with brief, shallow links. A study, based on a probabilistic country sample, conducted by the Ministry of Economy found this same weakness. This study emphasized "the scarce importance that universities along with public and private technological institutions have in inspiring innovative initiatives in industrial firms" (Technical innovation Program,1997: 32-34). This indicates that between universities and firms there is what the Network Theory calls "structural holes" (Burt, 1992); there are no connections that allow interaction and the flow of knowledge. [32] This is a very important limiting factor that affects what we could abstractly call the "national innovative system", that is, the global innovation capacity of the society and its institutional expressions.

[31] The source for these data is Publimark, Nº142, April 2001. Other cases of new franchises may be found in Estrategia, August 27, 2003, which informs, for instance, about franchises in dry cleaning and hair salons, with projections for some 160 locations.

[32] One significant exception was derived from Corfo (public agency for economic promotion) actions. Corfo fostered the development of joint projects between firms and other entities, but their scope was still very reduced.

The major difficulties that Chilean firms have encountered in their expansion in Latin America in recent years, difficulties that will continue and, according to some, will become even more accentuated in the future, presage a growing convenience or rather necessity to seek out alliances, be it to compete with European and North American multinationals or to unite with them.

* * * * *

Together with internationalization, changes in ownership and the establishment of alliances are probably the most relevant strategic “structural” actions. If we examine the combination of these measures we see that 43.7% of firms have conducted both types of changes during the past ten years and only 18.8% have carried out neither of these changes. As the data show, these are changes that an important proportion of firms have made. They are changes that have marked the panorama of medium and large firms.

2.2. Internal structure

The above said has referred to the "outside structure", that is to say to the establishment of ownership links or alliances with other firms or to national or international expansion. This involves, internally, the differentiation of new activities and the development of additional coordinating mechanisms.

We will now refer to some key dimensions of these processes of "internal" structuring of the firms studied. We will consider four aspects in which there has been change: (1) development of lateral connections and horizontal and global coordination mechanisms; (2) structure lightening with the reduction of roles, hierarchical levels and departments; (3) structural differentiation with new roles and units added; and (4) decentralization. [33] An overview of results is shown in the following table.

[33] It is worth noting that, if we were to follow Mintzberg - whose statements are the most integrative and consistent in terms of organizational structure - in relation to the structure's dimensional components, we should also consider other aspects: formalization, knowledge standardization, planning and control systems, and realm of authority. Nevertheless, we have chosen to organize the material differently. We will address formalization in a subordinate way here and later on. When we refer to planning and control in a subsequent section, we shall refer only to high level planning. The problem with the realm of authority or "unit size" in Mintzberg's terms is too specific and therefore we will not consider it. Dealing with knowledge and norm standardization, as an organizational coordination form, would require specific research into this matter because of its complex nature; therefore, we will refer to them occasionally, but without in-depth treatment.

TABLE III.9: CHANGES IN ORGANIZATIONAL STRUCTURE (2): INTERNAL CHANGES (% of firms that have made each change)

CHANGES IN ORGANIZATIONAL STRUCTURE			INDUSTRIAL SECTOR		SIZE	
		TOTAL (%)	Manu-facturing (%)	Servi-ces (%)	Medium (%)	Large (%)
Creation of management teams or executive committees	Since 1990 approx.	63.3	64.7	61.6	43.8	85.7
	Last 3 years only	30.0	41.2	15.4	25.0	35.7
Development of lateral interconnections among firm departments	Since 1990 approx.	63.3	50.1	78.6	60.0	66.7
	Last 3 years only	23.3	18.8	28.6	40.0	6.7
Creation or redesign of information systems	Since 1990 approx.	73.4	62.6	85.7	60.0	86.7
	Last 3 years only	46.7	43.8	50.0	46.7	46.7
Reduction of hierarchical levels	Since 1990 approx.	46.9	50.0	42.8	37.6	56.3
	Last 3 years only	34.4	44.4	21.4	31.3	37.5
Reduction of the number of departments	Since 1990 approx.	34.4	38.9	28.6	31.3	37.5
	Last 3 years only	18.8	22.2	14.3	25.0	12.5
Creation of new departments	Since 1990 approx.	51.7	41.2	64.3		
	Last 3 years only	32.3	29.4	35.7	-	-
Decentralization in the decision making process	Since 1990 approx.	38.7	33.4	46.2	31.3	46.7
	Last 3 years only	25.8	27.8	23.1	25.0	26.7
Formation of business units	Since 1990 approx.	40.0	25.0	57.2	18.8	64.3
	Last 3 years only	20.0	25.0	14.3	6.3	35.7

It can be observed that lateral and global integration together with greater differentiation are the aspects that most generally have experienced changes. Structural lightening follows, and finally, in a third of the firms, decentralization. We will now examine these results in more detail.

Lateral and Global Integration

The greater the complexity in the relationship with the environment, the greater the internal complexity. This inevitably creates the need for greater differentiation and coordination. More work in lateral connection is required especially among different functional areas that have to align themselves adequately. Also greater general integration is needed among all parts of the organization, so that all areas of the organization converge toward the objectives or strategic orientation of the firm. This is reflected in the 63.3% of firms that have been implementing executive committees and developing greater teamwork at a management level, and in the other 63.3% that have been establishing lateral interconnections among areas of the firm. Frequently, also, firms are simultaneously developing both measures (48.3% of sample firms are doing so).

Management committees are extending further and further and are functioning more often. It is common practice to have weekly management meetings or at the most every fifteen days to review the running of the business from a global perspective, to distribute information, to broach current problems and to coordinate themselves “to all go in the same direction”, as one manager stated. Most typical are executive meetings every Monday. In this way after reviewing what is coming up, the management task for the week is coordinated.

To a different degree and intensity the firms have also established other diverse committees, with restricted focus, at an executive level. For example one firm (MM15) has a Quality Council in which the three main managers and two factory Superintendents participate. Another firm (ML18) has an Executive Product Committee, that deals with national production and distribution and a Corporate Product Committee that looks at the issue from an international perspective including exports and redefining product lines. In one service firm (SM24) they hold weekly meetings of all department heads. In another, inter-department

meetings are held once a month but including more people from the hierarchical scale of each department. In one service firm (SL20) one manager explained the forming of committees as a habitual process in the firm; they are always forming and disbanding such committees that include people from different areas. In this case, this is a practice that was previously in place, but the interviewed manager noted that in recent years it has been intensifying. It is a fundamental means to achieve coordination and keep orientated towards common objectives.

When lateral connections are numerous and assume greater decisive relevance, when for example they consist of projects or programs that involve people from diverse departments who then form a type of double dependence, a matrix type of structure is created. This is peculiarly usual in firms that work in the high technology area (software, biotechnology, etc.) or in firms that provide complex professional services (consulting firms). In our sample, telecommunications firms, who provide advanced services with elevated knowledge content, showed a tendency to this type of organizational structure. As one of the managers said, they have developed “matrix attitudes”. However the systematic stabilization of such lateral groupings and the structural expression of effective double dependency was shown to be scarce or partial.

It is known that the formation of this type of matrix structure needs a corporate culture and ad hoc management styles, in which collaboration and dialogue should be valued and negotiation should be a common practice. Absence or weakness of these traits generates problems in the implementation of matrix structures. This explains the difficulties and the many failures for implementing such a system. This could also be the reason why managers of national firms are reluctant to experiment in this type of structuring.

In one case (MM1), in which the recent tendency had been in the contrary direction - to **suppress** some instances of lateral coordination -, this was done

at a moment of crisis for the firm, when the firm had not been able to organize its actions with a clear strategic perspective that answered the challenges of the market. The interviewed manager admitted that it was very difficult to achieve collaboration. In the firm, they were not able to legitimize these coordination processes and lateral support. It could be thought that this was one of the obstacles that the firm had had in the development of an adequate strategy and which had them in the difficult situation that they found themselves in. This negative experience ratifies the importance and the need to implement this type of mechanism in the firms.

Therefore, the value of teamwork at a management and executive level is generally accepted, and this is manifested by the growing levels of implementation. These results coincide with those found in various studies conducted at the start of the 90s (Castillo, Maggi and Gini, 1994; Geller and Ramos, 1997). This seems to be a consolidated tendency. These lateral connections however are not or only rarely seen in lower hierarchical levels. At most, they reach the supervisory level. We will refer to workers' experiences regarding this in more detail in a following chapter.

As is predictable, the larger the firm, the greater the need for integration and lateral coordination. The data in the above table show this situation clearly.

Information and Communication Technology is playing an important role in the growth of global and lateral coordination. So much that 73.4% of firms have made important changes in their information systems, generally adopting some ERP, at least some modules. This is a change typical of recent years (in 46.7% this has occurred in the last three years and at a growing rate). Some firms have only delayed their adoption for cost reasons. E-mail and other digital networks are also playing an important role in organizational coordination, but we will mention that in a following point.

Structural Lightening

The lightening of organizational structures is a generalized tendency throughout all the firms in the world. This is associated with more intense competition and is facilitated by the ICT.

In Chilean firms, the most outstanding example of this is the **reduction of hierarchical levels**, which has been carried out by 46.9% of firms, naturally to a greater extent in large firms. This has involved the elimination of hierarchical positions at supervisor and management levels. For example, in a manufacturing firm, dependent on a multinational (ML11), in the search to be more cost efficient, management was reduced, with three managers being removed (623, 634). Also from this same perspective of structural lightening, the same firm had also developed increased multifunctionality of staff, which allows tasks to be carried out by fewer personnel. In one service firm (ML16) the number of supervisors went from being four per section to only two; simultaneously it had also been encouraged greater worker autonomy (645). In a medium sized manufacturing firm (MM8) the technical manager said that the policy had been to “flatten the organization chart”, to avoid having two much middle management and to ensure that upper management consider its work in more integral terms. Regarding this, one could say that lightening is compensated by more polyvalence at the management level (612, 613).

Mergers have, along with letting firms grow, brought about forms that are relatively lighter than the sum of the parts, implicating massive management level elimination and considerable middle management removal. This has been the case with ML3, where drastic reductions were made. At a management level, for instance, out of ten managers, two remain (605).

Also lightening has occurred through the elimination of areas or departments that have been externalized. For example, SL31 eliminated their computing department and this service is now being provided by an external firm. We will refer to this means of organizational lightening, which is very important, further on.

In some cases firms have resorted to creative redesigns which have generally been **supported by information technology**. What SL20 has done is illustrative of this point. Three years ago in the offices of this bank operations chiefs were eliminated. Now there is what is called "**a virtual operations chief**" who is mobile and is in charge of six branches, which he constantly visits. This change went against traditional thought on the subject. "Before", says the human resources manager, "it was always thought that every [bank] office needed an office chief who would look after the commercial area and a operations chief who would see to the operative part". However, with this "virtual operations chief" the same is achieved as before without problems. His work is, undoubtedly, made easier by computing tools that facilitate controls and operations at a distance (664). An analogous event is seen in an industrial products commercializer (SM26). This firm closed a regional branch (in Concepción) and in its place now has a commercial operator for the zone. This operator works in his house where he has the computing means to connect himself with the head office, to send orders and to receive information about products (711-729). This facilitates flexible commercial growth, with minimal installations.

Structural Differentiation

In spite of what might be thought, yet together with this reduction tendency, there has been a growth of the internal structure, specifically through the creation of new departments and new roles. This has happened in 51.7% of firms, and in

around a third of the total if we take into account only the last three years, that is to say under the yoke of the economic crisis.

How is this apparent contradiction between structural lightening and growth explained? The general answer is that role or level reduction affects mainly those that basically constituted flow lines for information or management processes, or those that were not deemed essential for firm activities, or that do not add special value to customers. The departments or roles that have been added permit to better adjust the organization to its environment. They obey to Ashby's classic principle of "requisite variety": **the firm needs to differentiate itself and increase its internal complexity in order to better adjust to the increasing complexity of the environment**. Thus, some of the departments created in the firms under study are:

- A "market intelligence" department, created a couple of years ago in a telecommunications firm (SL31), intended to concentrate knowledge, information and databases of its different customers (781, 786).

- A Business Direction, created by a supermarket owner (SL27) in efforts to better adapt to the market. It includes studying the operation and commercialization of different food and non-food products, as well as price competitiveness by means of comparative studies with its competitors (742, 749).

- A Customer Service department, designed by a commercialization firm (SM29) as a way to provide its consumers with guidelines, solves their problems and answers their queries. In so doing, they tried to give a "professional response" to the numerous calls received each month, thereby relieving the pressure on stores (775).

- A department to address environmental and security concerns (ML11), a Logistics unit (ML16), an Internet management office (SL20), a Department of Studies (ML3), a Quality area (MM14) and so on.

In other cases, such change has consisted of the **differentiation of what was previously carried out in an aggregated way**. For example, an electronic transaction processing firm (SM22) separated: (a) a systems development area - in charge of searching for and developing new functionalities in response to its customers' requirements - from (b) a technological area - in charge of administering computer systems, studying technological advances and proposing the technological strategy - and from (c) an Operations area - in charge of user testing, verifying the correct operation of the processes and reconciling the daily activities (671, 672, 680).

Mergers allow for a considerable increase in internal differentiation, as far as product or service lines are concerned. In general, growth has been planned in that direction, thereby providing better matching with the prevailing market characteristics.

In contrast, one case (MM1) showed a clear process of internal **de-differentiation**, whereby the operations, commercial and accounting departments that until then had been separated were united, and the respective manager of the new unit was compelled to deal with those different aspects simultaneously (600). However, this was not a planned decision in the firm; instead, it came as an emergency measure to help the firm to surmount the crisis it found itself in. Similarly, another firm (ML2) was particularly undifferentiated, with different roles concentrated on just one person (618). This makes sense as part of a very radical minimum cost and low price strategy, which until now has proven to be very effective, but at the same time involves many risks. For further

future development after the current capital accumulation phase, the firm will probably need to take steps to increase its differentiation.

Decentralization

As we move from relatively stable levels to more complex and dynamic ones, it seems advisable to "lower" tactic or operational decision making to those hierarchical levels closer to the situations requiring some decisions. That is the general principle and, actually, there is a fairly general tendency in that direction. But when and how that will take place depends entirely on other factors. For example, the Flexible Specialization approach emphasizes a strong and significant corporate decentralization but this is thought in a context of collaborative cultures where trust is greatly developed and labor is highly qualified and organized into powerful unions (Appelbaum & Batt, 1994: 37-39, 44-47). Chilean firms have witnessed a rise in decentralization, but this has not been one of the core or more generalized measures (it is only mentioned by 38.7% of the firms). We will see later that this decentralization may well be called **"incomplete"**, for it has not been "lowered" enough.

One structural measure with important decentralization potential is the constitution of **business units**, in other words, units designed and evaluated according profitability criteria, which gather different functional areas under their hierarchical umbrella. This implies that such units are to be managed and operated as small firms, thus allowing for responses to the demands of the environment that are both faster and based on experiential knowledge. In the sample under study, 40% of the firm managers claimed to have carried out some sort of structural redesign following this logic. For example, in the last three years, one of the firms in the telecommunications sector (SL21) changed all its branches from mere customer service units into entities conceived under a more comprehensive sales and service concept. Thus, each branch -as one of the

firm's executives tells us- "is like a mini company in itself, with its own administration, human resources, technical service, customer service and sales, in addition to its own relationship with dealers" (798). So, following this same logic the different branches - says another executive - must "become self-financing entities in the short term, with their own profits and a certain degree of independence from the main office" (803). The effects of this measure in terms of coordination and integration are multiple. Inside each branch, there is great pressure towards integration and coordination around the same orientations. On the other hand, coordination on a general organizational level is now mainly based on the assessment of each branch's profitability, which is an expedite market-based mechanism to help relieve the upper management level in the process of responding to the demands of the environment. This is left to a great extent to the individual units.

This produces the same effect we noted in the case of the multinationals, which is inherent to the multidivisional structure (Mintzberg, 1979): the market supplements to the hierarchy, operating through the competitive pressure among the different branches, as a very effective and efficient control mechanism that forces the individual units to be cost-cautious and to continually improve their adaptation to the particular environment they interact with.

This is a complex change involving a shift in the approach used by the organizational units - or, as systems theoreticians like to say, a different "self-observation" stance. In the case of SL21, this change has been slow but so far effective. In order to facilitate the internalization of the new perspective -explains a branch manager-, executives from banks were hired to contribute with their bank branch approach. So, the concept being developed is customer service, but also considering profitability, and continual assessment of whether the branch is making profits or taking losses, besides obtaining customer satisfaction (795).

As we can see, such a measure leads, on the one hand, to a marked decentralization, but it also contributes to a greater internal integration, greater coordination and lateral collaboration -within the units- than with a mainly functional organization. At least, the pressures in that direction, which to a great extent come from the market itself, are strong.

2.3. Conclusions about changes in the organizational structure

As we can see, the most crucial changes concerning the organizational structure are those related to "external" structuring: links with other firms and both domestic and international geographical extension.

Inter-organizational networks with **prevailing ownership ties** have acquired noteworthy importance. The more complex form of these networks are business groups, but smaller and economically less powerful firms can also establish small local ownership networks.

Chilean firms seem able to be typified under these two characteristics. First, the dissemination of ownership networks, which extend to smaller firms having networks of their own. Second, the emphasis on ownership as a requirement for establishing these networks, which seems to be indicative of a generalized **weakness of trust** as a means of coordination. Ownership is assumed as the only **safe** method to achieve it.

The development of **strategic alliances** appears as a line of change for this situation. They represent an emerging phenomenon of very recent introduction in this country, with a significant vitality, in spite of shich, still needs to be further assimilated by managers and entrepreneurs. Nevertheless, the good results deriving from the already existing alliances together with the public notoriety of many of them suggest that this structural practice will soon extend. So, we can

anticipate that during the first and second decades of the current century they will become a fashionable practice.

The development and effectiveness of **global production chains** also show a possible path that Chilean firms may follow. But to which extent this experience may be generalized is yet to be determined. The information we manage does not allow us to issue any statements in that respect.

Thus, we may so far say that the Chilean "model" has mostly seen the development of a firm based on sui generis networks that clearly emphasize ownership ties. It may be stated that it preserves Fordist features within a typically post-Fordist network logic. The Fordist remnant is also associated with the trust problem.

The firms' significant international expansion has very clear territorial boundaries, particularly towards neighboring countries. This international structure does not display the unanchored character of the post-Fordist prototype and seems to reflect the desire for Fordist stability. And probably this is considered safer, although it entails important risks, as shown by the recent economic difficulties in Brazil and Argentina and their disastrous effects for the Chilean firms established there. Some European and American multinationals have made greater investments in Latin America, which, in addition to the new free trade agreements and the recent crisis, makes it possible to anticipate that the external growth of Chilean firms will suffer some significant transformations faced with this new scenario of threats and opportunities. One might well predict that these firms will venture farther away from the national territory and will look for tighter bonds with foreign capital, attempting a more effective transnationalization. In any case, not carrying out substantial changes in the way international expansion is being conducted implies the risk of relative stagnation and that Chilean firms be surpassed by foreign competition.

As for their internal structuring, firms have realized a series of changes. Organizations have tended towards internal differentiation in order to achieve a better structural fit with the environmental complexities. Additionally, they have multiplied their lateral connections and coordination mechanisms. On the other hand, they have taken several measures tending to lighten the structure through the elimination of positions and levels with little contributions to the firm or that are easily replaceable. Finally, although there has been some degree of decentralization, it has been limited to the higher and middle hierarchical levels. Thus, empirical evidence shows that this decentralization has been less relevant than one could have thought or expected.

3. Global programs for organizational change

In the previous sections, we have addressed strategic and structural changes that tend to involve the organization entirely, in its relation to the environment. This section will deal with other change efforts that try to develop and articulate different organizational improvement actions with a global perspective. Next chapters will deal with more specific organizational changes - externalization, technological change, redesign of the work organization, etc.

These global efforts are programs based on one particular perspective - theoretical, methodological and technological - about the organization and how to effectively improve its operation and results. One thing they have in common is that they carry out sequences of activities researching on the organizational reality, designing change projects and monitoring the improvements. On the other hand, they differ in their attention focuses, value orientations, concept of organizational reality, and the specific procedures and techniques utilized to diagnose and intervene. In general, these programs are implemented with the help of outside consultants, given the fact that specialized knowledge is required and that it seems better that changes be looked for and implemented by people with no perceived ties with the prevailing order and internal interests.

Some of these programs, which in Chile have managed to earn relative recognition, are: Strategic Planning, Benchmarking, Total Quality Management, programs related with the ISO 9000 certification, Organizational Development and Business Process Reengineering. There are also other approaches that, unlike the aforementioned ones, do not fit into a thorough process of organizational change, but rather to the diagnosing phase. Nevertheless, in view of their relevance and relative diffusion, they deserve to be included:

Organizational Climate evaluation, Organizational Diagnosis, Corporate Culture Studies and Environment Analysis.

The following table provides an overview of the application of these programs in the firms under study.

TABLE III.10: APPLICATION OF GLOBAL PROGRAMS OF ORGANIZATIONAL IMPROVEMENT (% of firms having applied each change)

PROGRAM		Total %	INDUSTRIAL SECTOR		SIZE	
			Manu-facturing %	Ser-vices %	Medium %	Large %
Strategic Planning	Since 1990 approx.	78.5	80.0	76.9	71.4	85.7
	Last 3 years only	21.4	33.3	7.7	21.4	21.4
Benchmarking	Since 1990 approx.	41.9	33.4	53.8	26.7	56.3
	Last 3 years only	3.2	5.6	0	6.7	0
ISO 9000 (already certified or in the process)	Since 1990 approx.	38.7	55.6	15.4	50.1	26.7
	Last 3 years only	35.5	50.0	15.4	43.8	26.7
Total Quality	Since 1990 approx.	20.0	11.8	30.8	6.7	33.4
	Last 3 years only	3.3	0	7.7	0	6.7
Organizational Development	Since 1990 approx.	20.0	16.7	25.0	6.7	23.4
	Last 3 years only	6.7	11.1	0	6.7	6.7
Reengineering	Since 1990 approx.	3.3	0	7.7	0	6.7
	Last 3 years only	0	0	0	0	0
Organizational Diagnosis	Since 1990 approx.	35.5	27.8	46.2	26.7	43.8
	Last 3 years only	12.9	16.7	7.7	20.0	6.3
Organizational Climate Studies	Since 1990 approx.	45.1	33.3	61.5	33.3	56.3
	Last 3 years only	16.1	22.2	7.7	13.3	18.8
Systematic Analysis of the Environment	Since 1990 approx.	51.7	41.2	66.7	35.7	66.7
	Last 3 years only	6.9	11.8	0	7.1	6.7
Organizational culture studies	Since 1990 approx.	9.7	5.6	15.4	6.7	12.6
	Last 3 years only	3.2	5.6	0	0	6.3
Outside consultants in management matters	Since 1990 approx.	67.8	64.7	71.4	56.3	80.0
	Last 3 years only	32.3	47.1	14.3	43.8	20.0

3.1. Strategic Planning

Strategic planning appears to be the most widely used global program. 78.5% of all firms studied have been using this procedure as a means to facilitate a

suitable adjustment with the environment. We have already shown the relevance of redefinitions in firm strategy to effectively respond to the big changes taking place in the economy and society, as well as to the intensified domestic and international competition. Strategic Planning, whether considered with all its formalized procedures or in more loosely and less formatted modes, has been the tool that has helped explore and define the paths to be followed by the firm. For that purpose, more than the specific procedures followed -this or that industry analysis matrix, this or that market-positioning model, etc.- the crucial element is the external and internal revision of the firm in its social and economic context, and the development of global reflexivity, considering the organization as interconnected with a dynamic environment. This allows the firms to identify the best action courses to fine-tune with the current and potential opportunities and threats existing in the environment. In this sense, speaking of "**strategic thinking**" or "**strategic management**" may seem more appropriate than using the term "planning", which emphasizes a more structured set of actions -the making of "plans". In the field of management practices, however, the labels that become legitimate are indeed important because of the recognition they generate and because they will continue to be used, even though their contents may change. This is a well-known fact among consultants, who normally resort to the set of widely recognized names, although they could include very heterogeneous products under the same label. On the other hand, some perspectives criticizing the more structured ways of strategic planning emphasize that the strategy followed by successful firms has resulted from the complex interactions between strategic orientations that have been deliberately defined, following a well laid plan, and others that emerge from the very actions being adopted, often from the lower layers" of the organization, without necessarily obeying to a deliberate intention of strategy building (Quinn, 1993). The importance attributed to the "emerging strategy" entails questioning the over-emphasis placed on the formal procedures of strategy design, but it does not question the usefulness of the procedures that help to train the different members of the organization -especially

those at the top- in “strategic thinking”. Such procedures ultimately help organizational members to internalize global reflexivity practices.

Among those Chilean firms that have implemented this tool, we find different combinations between the more formal perspective and the more flexible one. Still, strategy design tends to be overly centralized at the top; in general terms, “strategic thinking” does not come any lower than management levels in these firms.

The following cases exemplify the situation in the studied firms. The first refers to a medium-sized service-oriented company (SM26):

> The Administration Manager explained that this firm has incorporated this process fairly recently: “I believe that this thing of the strategic planning has been developed during the last three years. Several SOWTs[34] are carried out [in addition to a whole set of activities]. I think planning has been somehow professionalized. When I landed in this firm [in 1995], the situation was different; in other words, at that time we would say: ‘strategic planning? what planet did it come from?’… So, it has not been an easy task to be able to introduce changes to this culture. [But,] today that stuff [the strategic planning procedures] is absolutely developed (…). It may be hard the first time, but then it comes as second nature” (220).
>
> The systematic procedure is carried out once a year, planning one year at a time, with three more in the horizon. “[Commercial areas] are business units, so [the manager of] each business unit makes his own planning and his own SOWTs. What do we [the top management] do? For example, we

[34] SWOT is a technique utilized in organizational diagnosis and environmental assessment and is frequently used in organizational change procedures. The acronym derives from the words Strengths, Weaknesses, Opportunities and Threats.

> provide the national parameters, the economy's growth rate and the expected annual U.S. Dollar variation [and other macroeconomic indicators], all of which are projections. Based on them, they see where they will grow, prepare a SOWTs, a planning, and say 'these are my main customers, and I will sell them this, this and this; I am going to have new customers, to which I will sell this, and I will carry out such and such projects.' So we make a general planning, where we add the actions taken by each division, with their respective earnings and expenses, and we integrate it all" (223).

This is an example of a strategic planning that privileges structuring, it is a highly formalized procedure with little room left for decentralized actions that may, from local experiences, contribute to the general strategy. Thus, strategic creativity lies on the top management, or even higher, on the owners themselves.

A second case is that of a large service-oriented firm (SL27):

> Through strategic analysis, this firm has defined its projected growth and determined the best cities to open new stores, considering the existing distribution channels and other factors. Strategic planning meetings have been the instance to study the firm's differentiation from its competitors, which has derived in adjustments to its market focus, store format redesign, the incorporation of a new type of store, the creation of a management division in charge of studying competitors' moves, and the changes to its corporate image. All this included support from outside consultants and implied several work sessions both inside and outside firm's offices.
>
> One factor that has facilitated the utilization of Strategic Planning in this firm has been a young management team, familiarized - through their

> university studies - in the use of these procedures. On the other hand, and despite all their efforts, they have been unable to integrate the lower levels to the strategic discussion. The Development Director told us in this respect: "In September of last year, we conducted a seminar where we presented the strategy. But it has been very difficult to make people participate; it's like they were afraid of asking. We presented the strategic plan and asked if there were any questions, but nobody asked anything; they are afraid of saying or doing something ridiculous, even though we have an open door policy, that communication is very straightforward and that the [management] team is very young. (…) It is hard to change an organization when it has history" (229).

In one competitor chain (SL25), in addition to annual definitions, the Operations Manager emphasized the importance they place on thinking about the strategy more often. "Changes - he says - cannot be planned for months or years; sometimes changes occur in a matter of weeks, forcing us to react immediately". Thus, if deemed necessary, this type of thinking and revision most likely occupied some of the time during the Steering Committee's weekly meetings (217). This would allow for a greater sensitivity in the face of scattered ideas and actions that may help articulate the strategy's "emerging" dimension.

And this is particularly relevant, given the dynamic competitive scenario these firms move in, with continuous new store openings, price wars and new marketing tactics being deployed. This in turn forces the corresponding internal dynamics to respond and adjust to these changes.

For multinational firms, strategic planning is a habitual procedure utilized to adjust local and global orientations. Local strategies must integrate global directives and adhere to them. Headquarters provides the strategic frame to be followed by subsidiaries, thereby facilitating international coordination (ML11).

Many of the major changes in the firms under study had been defined from strategic planning projects: mergers (ML3), relations with vendors (ML7), identification of places to produce and commercialize (ML18), new business (SM22), etc. This shows how determining this tool is proving to be in helping firms achieve the best adjustment to their environment.

Its relation with internal organizational adjustments is less clear, though. In other words, the use of strategic elaboration as a means to direct internal changes appears to be comparatively less well defined, more deficient.

* * * * *

To sum up, strategic management is perceived as a necessary tool, and its use has become notably widespread, with important changes derived from such application.

The procedures for strategic analysis and discussion were more internalized at a higher management level. The firms under study experimented difficulties for extending strategic thinking to the lower levels, which prevented a more thorough use of the firm's internal knowledge.

3.2. Benchmarking

Benchmarking is a procedure that facilitates to put the experiences gained by other firms to work to one's advantage. Through benchmarking, a firm carries out a systematic information collecting job about some of its own processes where improvement is deemed necessary, and compares them with those obtained by other successful firms in that matter. This enables the firm to analyze

experiences that may be adapted to its own reality and design and accelerate internal organizational changes. In the case of large firms, especially of the divisional type, this may also include profiting from the experiences of some of their own organizational units that have proven to be particularly successful.

Thus, efforts are made towards identifying the best practices being conducted in other firms or organizational units, in those areas the firm in question considers weak or where it feels a need for improvement; then it must try to identify the key factors in the processes studied that lead to the effectiveness of the practices analyzed. Finally, the ways in which these results may contribute to redesigning the processes within the organization itself are established. Benchmarking acquired widespread popularity during the 80s; for example, a survey conducted on the top 1,000 firms of the United Kingdom revealed that more than two thirds of them were benchmarking. Additionally, the managers of 82% of them considered it a successful experience (Bendell, Boulter and Kelly, 1993; Zairi, 1996).

The first manifestations of benchmarking, a few decades ago, were mainly oriented towards the **products** themselves. In these cases, the process consisted of “reverse engineering”: the product was disassembled and examined, trying to identify the underlying principles, criteria or mechanisms of their operation and production, in order to improve the design of the firm’s own products. Benchmarking during the 80s, on the other hand, was mainly geared towards the analysis and improvement of organizational **processes**. During the 90s, the efforts have tended towards the application of this comparative exploration, which seeks to take advantage of the best world practices, to more central aspects of the business, such as access to new markets, development of new products or establishment of successful mergers. Additionally, this requires some type of business alliance with the firm one intends to learn from. Such an alliance should incorporate these actions into a larger frame of mutual benefits.

This type of benchmarking has been called “Strategic Benchmarking” (Walton, 1993).

In Chile, the managers in 41.9% of the firms claimed to carry out some type of benchmarking. In none of them, however, benchmarking was strategic. In nearly half of them it corresponded to the old practice of product benchmarking. Years ago, some manufacturing firms (ML18, ML7, ML4) used to import home appliances and other manufactured items from other countries and explore the way they had been built as a means to get fresh ideas for the improvement of the firm’s products. [35]

Something similar occurs in the field of services. For example, one bank (SL20) used to review home loan, savings and other financial products offered internationally, and decided which of them it could adopt and how; a commercial firm (SM23) used to explore the kinds of stores used in other countries and their possible adaptation here (258).

More closely to **Process** benchmarking, one supermarket used to analyze the procedures utilized by the world most successful supermarkets, such as Carrefour and Wal Mart. For this purpose, the manager we interviewed said they had good contacts within these firms, even though they may one day become competitors (257).

Internal benchmarking is widely practiced in multinational or very large firms. Several of the firms under study fell within this category. For example, one manager at a manufacturing firm that is part of a multinational explained that this world organization has a significant information network and a methodology to transfer experiences inside the corporation. Nowadays, this is mostly facilitated

[35] Katz and Vera (1997) provide details of product reengineering in a machine tool firm studied in-depth.

by information technology, and they have, for instance, web pages that concentrate and organize related information. Thus, company's members throughout the world are encouraged to take advantage of the already tried projects and better practices. The message is: "Don't waste your energy trying to invent what already exists; just copy it or adapt it" (237-239).

One service-oriented firm (SL27), with numerous stores along the country, used benchmarking practices among them. They tried to determine the stores with the best personnel management, services or insurance contracting practices, etc., based on statistical data. Such better practices were later generalized throughout the firm. According to the manager interviewed, this had enabled them to obtain "substantial improvements" (263, 264).

Process benchmarking as such implies a systematic research, measurement and information collection task, with teams in charge of developing the possible transfer process. In contrast, the way this is carried out in Chile is, in most cases, very flexible, fairly intuitive and not very systematic. The form applied here corresponds to simplified versions of process benchmarking, where an exploration and imitation logic predominates instead of the methodologies developed internationally. This allows for fast and low cost results, but, at the same time, it implies limitations for using this tool with more complex processes.

3.3. Quality management programs: Total Quality Management and ISO 9000

Quality management has become a central element in firms. “Quality” has the peculiarity that together with dealing with the activities within the organization refers simultaneously to the customers and their satisfaction. In this sense, this notion includes a fundamental connection between the organization and its environment. Quality management permits to devise and carry out changes within the organization that better adapt it to its environment and that enable it to react to its competitors more successfully.

The **concept of quality** has undergone substantial change in recent decades. In a Fordist paradigm context, quality was directly linked to the product, at least in the case of manufacturing firms; the main emphasis was placed on the “objective” aspects of quality, that is, those aspects the firm could determine by itself. Therefore, the focus was on inspecting the product and identifying possible malfunctions or deviations from predetermined standards. Even though service-oriented firms had closer contact with the customer, in general they also determined quality focusing mainly on their internal front. One extreme example is the case of government offices that placed excessive importance on all papers being correctly completed and all operation regulations being observed, with minimum attention to the problems or difficulties of their users, let alone their “expectations”.

In today’s prevailing notion of quality, the central element is **customer’s perception** and the evaluation s/he makes of the product received and the subsequent use and interaction with the firm. Quality can no longer be reduced to some objective criteria that can be determined internally, for example, by the firm’s engineers; instead, it involves to understand the customers’ needs, expectations and perceptions. This implies moving to a “dynamic”

understanding of quality. We may say that we are in the presence of a "**constructivist**" notion of quality -it is seen as fluid, changing, shaped from the perspectives of multiple actors, and as part of a sociocultural process.

From this perspective, the focus of quality is no longer the mere product or service, but the entire **interaction** with the customer, and everything that inside the organization has to do with this interaction or that makes it better. Now, what are firm's internal elements that can contribute to making the response to the customers more appropriate? Some of the potentially contributing aspects are, for instance, the existence of activities that explore customers' needs or adequate post-sale services. If we consider these aspects - although the same holds true for other analog ones - the results of studying customers' needs as well as the problems identified in the post-sale service must **be relayed to the operational core**, in order for it to prepare the corresponding responses or adjustments. In turn, these adjustments will require changes in personnel training to be adopted by human resources management, if needed, or a complete redesign of a certain product, etc. In other words, this concept of quality shifts the attention from the product or service itself to the **organization as a whole** and considers its internal processes with the perspective of looking for a better response to customers and, furthermore, to their possible desires or expectations.

This new logic had yet another repercussion. The notion of "customer" was extended **inwards**; it is now habitual to consider, inside a firm, that some organizational units or employees are customers of other units or employees that provide them with the elements they require to carry out their activities. Thus, the same principles of trying to satisfy a customer's needs and expectations may be

applied here, and it will therefore be necessary to analyze, prepare and design the work interactions for it to become possible.[36]

This approach greatly contributes to make visible the effects coming from failures, errors or inefficiencies on the organization's internal processes, thus facilitating to detect them before they reach the final user.

The historical road to develop this approach has seen many variants; but, at any rate, the central aspect has been this focus on external customers and the search for the best answer to them through the revision of internal organizational processes. For reviewing organizational processes diverse methodologies and techniques have been developed, including statistical analysis and control, organizational procedures for reviewing processes, and techniques for team working.

As we can see, in the notion of quality clearly appears the contrast between two different concepts of firm and the way it relates to the environment. On the one hand, we have the technical and objectivist (positivist) notion, which prioritizes internal definitions and measurements and, on the other, there is the dynamic and constructivist notion of a quality that exists inside the web of perceptions and that is always elusive. That is why, within this second approach, rather than trying to find standards to apply to the different products or services, one can merely attempt to define standards **for the processes** required to shape up those products or services. In addition to coinciding with the characteristics of the post-Fordist paradigm, this new notion also bears cultural affinity with postmodernism. It implies, in the firm's social reality, the presence of resignifications of organizational reality, where fluidity, indetermination and constructivism predominate.

[36] In Flores (1994) we find a systematization and formalization of such internal work circuits, which are understood in terms of internal "customers" and "operators".

Anyway, we are not talking about a radical variant of postmodernism - à la Baudrillard- but about a moderate variant, where postmodernism is conceived as a radicalization of modernism without reaching complete textualization of reality and dissolution of all objectivity. Within the moderate variant, we recognize the presence of social objectivations and conditions, although their essential historicity is unveiled.[37] In particular, what we are referring to is the existence of certain transformations or postmodernizing processes in a cultural context that is basically **not** postmodern.

One concrete place in which a substantial portion of these new notions has historically crystallized is Japan. There, several organizational practices were shaped during the 60s and 70s, which underwent gradual refining. Later, and after their effectiveness became public, they have disseminated across the world (Coriat, 1992). Today, they find one of their most significant expressions in the so-called Total Quality Management.

On the other hand, some quality certifying entities in industrially advanced countries adopted these new notions and insights, thereby decisively contributing to their international expansion. The most relevant case, which is particularly important in Latin America, corresponds to the ISO 9000 norms. The International Organization for Standardization (ISO), headquartered in Geneva, Switzerland, and currently with more than 150 member countries, applies these norms to certify firms. For that purpose, it requires firms to comply with a series of criteria related to their organizing processes. And such certification is, in many cases, a condition to access certain markets.

[37] With this, we follow the ideas of Rosenau (1992), who speaks of two clearly identifiable orientations within postmodernism that she calls “skeptic” and “affirmative”, respectively.

The standards contained in the ISO series specify requirements and recommendations for designing and assessing management systems and processes so that the firm can provide its customers with satisfactory products and services. The focus of this certification is on processes, and not on the resulting products or services.

In their current orientation, these norms can be traced back more definitely to 1987.[38] I subsequent years they have been further refined and adjusted to the diverse types of firms, and now this certification may be applied to any type of firm, whether manufacturing or service oriented. Thus, they now include diverse service sectors, such as education, health and information technology. As a result, towards the end of 2002, more than 560,000 certificates had been delivered in 159 different countries (International Organization for Standardization, 2003).

Applying the review and analysis procedures of the typical processes of Total Quality Management results in continuous application of improvement measures. This is the idea behind "continuous improvement", or Kaizen, which derives from the repeated cycles of diagnosis review, elaboration of change projects, implementation and evaluation measures. The activities for ISO 9000 certification contribute to the establishment of such procedures, and therefore they are particularly useful during the first stages of a Total Quality program.

What is the situation in Chile? 46.9% of the firms in our sample had already developed or were in the process of developing a **global program to address the issue of quality management** - whether as Total Quality management or oriented towards ISO 9000 certification.

[38] Although the systematization of quality norms may have seen significant development since the 1950s, in which Juran's Quality Control Handbook, from 1951, may have been a distinctive milestone (Hoyle, 1994: 27, 28).

On the other hand, in a mere 20% of firms, managers claimed to have embarked, during the last decade, on a specific program of **Total Quality Management**, that corresponded to, or at least looked like, what these programs actually mean internationally. As a point of comparison, studies conducted in some of the U.S. Fortune 1000 (the 500 largest manufacturing and 500 largest service oriented firms), revealed the situation illustrated in the following table:

TABLE III.11: PERCENTAGE OF THE COVERAGE OF TOTAL QUALITY MANAGEMENT PROGRAMS IN THE U.S.

	1990	1993	1996
Percentage of firms with a Total Quality management program	73	76	66
Average percentage of employees integrated into the program	41	50	41
employees covered by the program	18	25	19

Source: Lawler, Mohrman and Ledford (1998: 58).

As we can see, the incorporation of these programs in thiscountry is way below the figures of firm and employee coverage.

The table also reflects, at least partially, the expansion curve of Total Quality Management. Following continual growth during the 1980s, it peaked in the early 1990s, and has since begun a declining process. These cycles in management practices obey to a multiplicity of factors playing together - referring to the creators, spreading agents and consumers of such practices -, which combine technical and sociocultural factors, including imitation processes and the establishment of "fashions" (Abrahamson, 1999). Declining does not necessarily mean that these practices as such are becoming less important. It seems more likely that, in many cases, they become restated, reconfigured and assimilated

into other models that, in turn, are perceived as a newer, more “fashionable” response to the needs that firms face.

On the other hand, 16.1% of all firms had already **been certified as ISO 9000 compliant** and 22.6% had already initiated, during the last three years, the proceedings to become certified. Certification has seen a steady increase across the world, primarily due to the influence of international trading ties between countries, and by the fostering action of governments and multinationals (Guler, Guillén and MacPherson, 2002). The following table contains data that illustrate the evolution of certification in Chile, as compared with other countries, including some Latin American countries.

TABLE III.12: NUMBER OF ISO-9000 CERTIFIED FIRMS (in absolute figures)

	Dec 1995	Dec 1996	Dec 1997	Dec 1998	Dec 1999	Dec 2000	Dec 2001	Dec 2002	Growth rate 1995-2002 (%)
United Kingdom	52.595	53.099	56.696	58.963	63.700	63.725	66.760	60.960	16
Germany	10.236	12.979	20.656	24.055	30.150	32.500	41.629	35.802	250
Italy	4.814	7.321	12.314	18.095	21.069	30.367	48.109	61.212	1.172
Spain	1.492	2.496	4.268	6.412	8.699	12.576	17.749	28.690	1.823
USA	8.762	12.613	18.581	24.987	33.054	35.018	37.026	38.927	344
Argentina	86	302	397	807	1.388	2.056	2.324	2.260	2.528
Brazil	923	1.198	2.068	3.712	6.257	6.719	9.489	7.900	756
Chile	21	29	34	61	135	235	229	327	1.457
Colombia	49	71	170	213	388	614	1.117	1.838	3.651
Peru	7	8	13	46	74	141	200	270	3.757
Uruguay	8	17	32	49	154	251	241	231	2.788
Central and South America	1.220	1.713	2.989	5.221	8.972	10.805	14.423	13.660	1.020
Mexico	215	412	711	978	1.556	1.843	2.233	2.508	1.067
World Total	127.349	162.701	223.299	271.847	343.643	408.361	510.616	561.747	341
Number of Countries	96	113	126	141	150	158	161	159	66

Source: International Organization for Standardization (2001, 2003)

Note: The drops in some figures in recent years evidence adjustments correcting prior duplication errors.

When estimating based on available figures, it may be asserted that the local medium-size and large firms certified by ISO account for a small proportion of the total of firms of that size. If only manufacturing firms were taken into

consideration –which account for the firms basically requesting ISO certification - with regard to the total of medium-size and large firms, those certified in 2002 would not exceed 10%. On the other hand, between 1995 and 2000, certifications in Chile have shown larger growth than Latin America as a whole, although its growth rate has been dramatically lower than other Latin American countries like Argentina and Uruguay.

Accordingly, even though 16.1% of certified firms we found is a figure still low, it would anyway be higher than the local average rate. Yet, the high number of firms that have begun to require certification recently would indicate that the process pace could be on the rise. This trend may be explained by the free trade agreements with the EU and U.S.A., signed last years, which would imply higher quality standards requirements. Further trade bonds with high certification countries constitute a factor that allows to forecast a local certification rise (cf. Guler, Guillén, MacPherson, 2002).

This matter is consistent with what was specified when discussing strategy. Quality is not among corporate strategic priorities yet. This would also imply that - except for a reduced number of firms, probably one third of the total number, at most- this new quality notion is yet to be assimilated and final product or output control remains among the preferred options.

Competition, export goals, and contact with higher-requirement markets are all major triggers of this certification concern, and certification is the main driver for local firms to incorporate quality assurance as part of their processes. In fact, 80% of the sample firms supporting a global approach to quality assurancecorresponded to ISO 9000-certified or under certification firms.

The managers interviewed emphasized the relevance of certification for market access. So, a manager of a manufacturing firm that was certified two years ago

(MM5) explained that, in the past, an industrial customer had little control on its suppliers. “Now, on the contrary, it is the customer that demands to know operating procedures of the firm; it is the customer that requires the firm to have ISO 9000 standard or any other quality certification standard implemented”. For example, he says, “we have just been approved by a firm from Uruguay, that sent a quality inspector to check our administrative procedures, quality control records of our procedures, and who gave us the approval. Such is the most modern scheme to purchase”. “In this subject – he adds – we have learnt a lot from foreign firms” (335).

The above was reiterated in another firm (ML4), which has already been given the certificate. The production manager told us that customer firms are increasingly demanding, “and they started to increase quality requirements, and ISO was a requirement that started to become widespread” until it could no longer be passed over by the firm (331, 332).

In another manufacturing firm (MM12) we were told that one of the most outstanding aspects of its strategy has consisted of trying to implement ISO 9000, which represents a significant backup to its exports, which are sent to several Latin American countries (358).

In the case of firms that are part of a multinational company, this international connection has been the way to receive pressure toward quality certification.[39] Such is the situation of MM6, certified several years ago: it had another certification in the past to sell in Europe, but later, corporate headquarters required the firms – unavoidably – to obtain ISO 9000 (344).

[39] This influence of multinational firms matches results obtained by Guler, Guillén and MacPherson (2002), in a research where they studied aggregated data on firms from 34 countries.

A similar situation has been faced by a financial institution (SL20). In this case, there is a strong and significant emphasis in quality throughout the transnational firm, and the Spanish parent firm has stimulated and supported the institution in Chile to review and improve its processes, and to obtain ISO 9000 certification (380, 381), becoming one of the first firms within the service sector to implement it.

Implementing Quality Management

In a few firms, Total Quality Management ideas and procedures have been applied with certain exhaustiveness. MM6 is an example of this. According to its Human Resources Manager, they follow "total quality philosophy" and adopt procedures for "continuous improvement". In consequence, they appeal to definitions of internal customers and suppliers, establishing operation agreements. They have also created "elemental work units", that assist them in process efficiency and improvement; and have implemented procedures aimed at detecting errors or faults in conformity within the production system, approaching thus the "zero error" situation. In addition, they use other procedures, such as, a management control system derived from the Balanced Scorecard System, which in spite of not corresponding to the same tradition of changes,[40] are well integrated with them.

These improvement procedures have, in some cases, been internationally packaged, including a few additional elements, under other labels. The "Six Sigma" program is an outstanding case, developed by Motorola in the U.S.A., in the mid 80s, and applied then with big success in General Electric, in the late

[40] Balanced Scorecard System has certain similarities with the Management by Objectives (MBO) technology, which is very similar, in turn, to the Organizational Development approach in its participating components and emphasis in communication.

90s.[41] However, although the Six Sigma has developed an image of its own as an Improvement Program, similarities and analog sources of inspiration may be highlighted between Six Sigma and Total Quality Management. Perhaps, what differentiates them the most is Six Sigma's emphasis on statistical analysis, its higher level of demand (from which the name was taken – from the six standard deviations, or six sigma -, reflecting the level of accuracy that is sought) and its attention to quantification, which, anyway, may also be found in Total Quality programs, which gurus, like Deming and Juran, are experts in statistics.

Anyhow, cases in which Quality Management has adopted the shape of an integral program are the strict minority. Most of the firms that have made efforts in this area only take a few elements. The production manager of a manufacturing firm (CTI) was categorical: "Systematic programs, no; a full Total Quality program, never". "We have – he continued – a 'little program'. We have total quality, but we have not developed work teams, namely, we do it the Chilean way... We do not have very detailed programs or records thereof" (279).

This is something that we will see repeating ahead in this text. Full, integrated, systematic programs are not adopted for improving matters concerning "soft" aspects of the organization. Chilean managers rather prefer to use "patchwork", to use "small programs" in a very "Chilean way", which are complemented with foreign terms to provide international flavor and legitimacy.

Implementation of these procedures has been time consuming and not free of resistance. Firms report implementation times of two or more years, which exceed times in other countries, such as Australia or Canada, ranging from 10

[41] As an expression of its effectiveness, in 1997, savings generated by the program in this firm amounted to US$ 750 million, and they doubled in 1999, reaching US$ 1,500 million (Pyzdek, 2003).

months to one year and a half.[42] In a firm (MM5), the interviewed manager explained difficulties encountered to apply ISO 9000 requirements: at the beginning, employees thought that reporting what they did in writing, was extremely bureaucratic. There was a lot of resistance, but – says the manager - "the one who did not meet requirements had to leave". They finally got used to it. ISO 9000 also made this firm develop a whole training program, as well as people renewal. In this case, they took two years to achieve certification (337, 338).

A significant aspect in implementating ISO 9000 and Total Quality Management programs is their virtuous pressure on **training**. It leads to think about training in a different way. Such is the case of a big manufacturing firm (ML7) that had obtained ISO 9000. Its production manager talked, for example, about changes occurred in supervisors training: "We had 50, 60 year old supervisors with 20, 30 years of work, and we had to tell them "from now on, you are no longer a supervisor, you are now a trainer". Then, we had to recycle them and make them take trainer courses, and, from then on, they had to train other people themselves, and they give the courses to other people, they train them, and things like that, in addition to do their jobs. It has been pretty good" (348). Both ISO 9000 and Total Quality are programs that enhances training, contributing to its better integration of with the rest of firm activities.

One of surveyed firms (MM8) was supported, for the implementation of ISO 9000, by Corfo (Production and Development Agency) through an **Associative**

[42] According to data from a research conducted in Australia (1995), average implementation costs and times for the ISO 9000 quality system were: for firms with 50 to 350 employees: US$ 83,000 and 10 to 16 months; for firms with more than 350 employees, US$ 144,000 and from 13 to 18 months. According to data from another survey, in relation to the USA and Canada (1996), from firms with 150 to 500 employees, average implementation costs ranged from US$ 102,000 to 121,000, depending on types of firms, and average implementation time was 15 months; for firms with 500 to 1,500 employees, costs ranged from US$ 147,000 to US$ 271,000, and implementation times reached from 15 to 17 months (Schuurman, 1997: 25).

Promotion Project (Profo - Proyecto Asociativo de Fomento**)** that co-finances actions undertaken by a group of firms (at least five). Through Profo, they visited other firms that had already been given the certification. One in particular (Cormecánica) was very inspiring to them. They made several visits, and personnel from such firm trained them on a project aimed at redefining the way to make maintenance (351).

Another incentive for these programs is the **National Award to Quality**, that was first offered in 1996 to different categories of firms,[43] and which is administered by the National Productivity and Quality Center.[44] This award, inspired in the Malcom Baldridge Award from the USA – highly prestigious in such country and very significant in generating recognition for the awarded firms -, seeks to promote excellence in management, including process management, planning, product development, information management, and other dimensions such as, people development and social responsibility.[45]

A couple of the studied firms had participated in the competition for this award, but it did not seem to have encouraged in them any kind of particular actions. It was rather seen as a way to take advantage from what had been previously achieved in benefit of public image. In such sense, this award is still too "young", and is just starting to show itself in the public space. There are other awards, such as, the Great Place to Work, administered by private entities that, probably due to a more intense and aggressive marketing campaign, seems to have obtained a much higher visibility and resonance.

[43] It was first awarded in 1997 and was extended to the public sector in 1998.
[44] This institution depends on the Ministry of Economy and is made up by representatives of the government, Production and Trade Confederation, and a national organization of unions (Central Unica de Trabajadores).
[45] The eight dimensions considered in the evaluation are: leadership; customer's satisfaction management; people's commitment and development; strategic planning; process management; information (measurement) and analysis; social responsibility; and results.

Some effect was also transmitted to other firms of the productive chain. At least in one firm (MM6), the interviewed manager emphasized the need to worry about it. “We must help our suppliers – he said – to also obtain the certification. If they do not get the certification, we must at least help them meeting the standards that are required to us” (342).

In the case of Japanese firms, continuous improvement practices, which are there highly widespread, have involved large increases in productivity, with the benefit of huge savings, but also with an increasing intensification of work that, in the early 90s was already generating widespread complaints in such country. Chile, as we will see herein below, is in general far from facing such a situation. However, in firms more advanced in implementing these innovations, these problems may already be encountered. Thus, in a service firm (SL21), with huge achievements concerning Quality Management, the search for an increasingly efficient use of time signified an stressful pressure to simultaneously meet customers requirements. Consequently, some difficulties had arisen to satisfactorily match the increased productivity with service quality provided to customers. An employee explained: “One thing is contrary to the other. They want both quantity and quality. It may be understood, but there is a tension between them, because, all right, you can provide quality, but quality may quickly disappear due to the little amount of time that you have to serve customers” (320).

Total Quality Management, in its full form, involves the constitution of **parallel structures**, which are at the service of organizational reflexivity, namely, that are used to review, diagnose, and project changes in day-to-day, standard procedures. We can say that these structures duplicate standard operation structure to watch it from a distance. This, in Chile, only has partial developments. Some roles are created within firms, a Department (ML18) or some committee, or there is a person in charge (SL25). In some cases, people

are prepared as monitors. Some teams are organized among employees. But all that does not usually adopt an integral shape. Those elements do not become a parallel structure which connects the strategic apex to the operating core, organizing thus organizational review, with both horizontal and vertical perspectives, and with the reference to customers and the environment, and which subsequently readily channels resulting projects. From surveyed firms, we found something similar only in two firms (SL20 and SL21), both of them service firms. One of them (SL20) has a department of Service Quality Management and all the areas have a Quality Committee. This firm is also connected to others pertaining to the same owners, and quality development is promoted in all of them, reciprocally enhancing this aspect among each other. Fuerthermore, this is one of the few Chilean service firms that have obtained ISO 9000 certification, resulting in higher self-requirements imposed to this firm (305, 380, 381). We can say that in this firm quality management notions, within a post-Fordist perspective, are already incorporated into the corporate culture. Something similar may be seen in the other firm (SL21), where meetings and organization of teams, both temporary and more stable, are abundant, with this team work aimed at reviewing activities that are being carried out, and at proposing adjustments and improvements. All of this being supported from other organizational instances that provide training so that these activities may operate properly.

Complementarily, the incorporation of quality notions to each employee's perspective of work is still too incipient in most of the firms. Only in the few above mentioned, this is something that could be considered organizationally achieved. Some progresses have been obtained in other firms with regard to certain aspects of quality – those which are most directly connected to the product -, but much less in relation to processes; or such awareness has only extended to small groups of workers.

On the other hand, given that these procedures are new and in view of their complexities, most of the firms have had to hire **external consultants** to implement them. Managers recognize the need and usefulness of such external assistance. In addition, in some cases, given the connection of these changes to other organizational aspects, such consultants have collaborated in other ways to organization improvement - as advisors to the Board of Directors (MM14), in an Organizational Development project (MM15), with regard to productivity management (ML4), etc.

Implementation of systematic Quality Management programs, in the new scenario, as it happens in both of the above mentioned service firms, has notorious impacts on service provision, in development of a better response to customers' needs, in increased internal efficiency, and in reduced costs.

On the other hand, regarding results, even without developing parallel structures or systematic programs, firms that have approached the certification process for ISO 9000 verify various beneficial effects, which are connected to firm's internal requirements of such certification. Managers involved in such efforts affirmed that work for ISO was useful to them, because it helped them to be more organized and to formalize procedures (the rule is very clear: "one has to write down what one has done, and one has to do what one has written down"); in such sense, it is a tool that supports management - a management with a more global and strategic perspective (MM13, MM14, ML16). It forces the organization to look at itself under more systemic, more global terms, and promotes lateral coordination among departments (MM5).

In addition, as we had already noted, another of its results is the fact that it also promotes training development within a well-defined framework. All the foregoing, although studied firms did not have measurements on these matters, has also resulted in positive effects on efficiency and better use of resources.

Another great advantage of ISO 9000 is that it may be used as a marketing tool. It is a requirement for different markets and customers. For others, in spite of not being a requirement, it becomes a “plus” of the firm, an additional guarantee offered by this firm and, thus, a differentiation factor towards the competence.

3.4. Process Reengineering

Process Reengineering is a relatively new organizational improvement approach, which worldwide dissemination started at the early 90s. It shares with Total Quality Management its emphasis in processes. It is based on a “lateral” look of the organization, considering processes that “cross” functional areas, starting from external customers, who are the receptors of the results coming from these processes. Under such perspective, the “internal customers” notion is also applied. The main difference with Total Quality Management is its much higher radicalism in improvements sought. Processes are expected to be thought over, from zero, only guided by the question: “how could they be implemented on the most efficient basis?”. It is, thus, a very technical and rational orientation. We can even say that it is a sort of Taylorism at a larger scale, applied to processes.

When applying these procedures, it is usual to find out many redundant activities, many activities that respond to internal or “historical” needs which are not always justifiable and which do not add any value to the product or service provided to the customer. Reengineering expects to detect such situations and then to re-design processes in the most efficient way. According to its most important disseminators, it was about “blowing the old order” and starting over (Hammer and Champy, 1993). As a result of the above, increases in productivity and reduced costs are also considerable. But this extremely technical approach leads to omit other realities of the firms, and provokes a multiplicity of unforeseen effects, which – if not properly treated – may generate bigger problems. This

improper treatment was the cause of many failures in the application of Reengineering. It has also resulted in a rapid decline, after a widespread growth and a quick apogee, in the use of these programs.[46] This decline, however, has not meant abandonment of reengineering core ideas, but rather their application within the framework of other perspectives of change, which are more sensitive to socio-cultural and psychosocial forces that give shape to organizations.

Information technology is a privileged tool used by Reengineering. It is not exaggerated to say that Reengineering is what Taylor would do if he had computers and electronic networks available. Re-designs and articulations among activities are made using resources and networks provided by information technology. This usually allows the firm to leave out roles which functions merely consisted of helping or mediating in information transfer or systematization.

Reengineering has gone through a similar cycle in this country, although in a much lesser scale. A first peculiarity is that a significant proportion of firms (41.9%) have conducted any **activity** within the context of Reengineering, but only a strict minority has developed **systematic and global** Reengineering programs. In the investigated sample, this is expressed in that only 3.3% has conducted Process Reengineering programs with such characteristics. Neither is this a type of program included in short-term firms' projections.

SL27 is a case of a firm using Process Reengineering, which started in 2001 doing it in some specific processes, for example, regarding maintenance. This firm has several dozens of premises and there are hundreds of maintenance requirements per month. Through Reengineering, explained a manager of the firm, "we defined a computer-based system which records every time that a

[46] According to the above-cited research, of the Fortune 1,000, in the U.S.A, 81% had a Process Reengineering Program in 1996 (Lawler, Mohrman y Ledford, 1998: 63).

premise has a problem and needs anything, creating thus a record of what is needed, the date in which the request was taken by the maintenance supervisor, and the date in which it was solved. We, therefore, keep statistics and control of the time we take in solving issues. In addition, all the paperwork, invoices should be recorded... the supplier arrives, a purchase order has to be issued, and then an invoice... all such process, or at least a significant part of it, is being automated. We will no longer need people handling papers or typing twice the same thing. Previously, we had a purchase order, for instance, with a box to be filled by the maintenance supervisor: 'fixing machine in premise No. 48'. It was sent here and another person had to enter it into a new system, after which it was sent to Purchasing, where an order was issued, which had to be typed again. The same thing was typed three times. The invoice was stamped here. Then, this process was automated. These multiple typing was useless and did not add any value, without mentioning the number of errors because typing was not always right. These changes will, in consequence, allow us to have one and a half person working in this process, instead of six" (394).

The foregoing illustrates contributions made by Reengineering and reflects that such actions may have significant benefits – in terms of efficiency and cost reduction – in spite of not being global programs for all the firm. We can even say that, as micro-programs, the eventual negative repercussions are attenuated and further damages are avoided. With micro-programs, negative effects may be compared to such of a vaccine that generates a positive alert of the organism. In this case, these actions make personnel involved in other processes try to improve their efficiency, to avoid the risk of more radical measures.

3.5. Organizational Development and Related Programs

"Organizational development" is a designation that started to be used at the late 60s to refer to a particular way to approach organizational change on a

systematic basis. It has been experiencing subsequent modifications and blending with other approaches and change procedures, making its current identity more blurred.

In its most essential and permanent aspects, this approach pays special attention to **psychosocial and socio-cultural components** of organizational reality, which are underlying technical and formal aspects, and which effectively support decision-making. According to this, these "underground" aspects, that are only partially and incompletely conscious, and which give rise to a sort of "collective unconsciousness", condition what happens in the organization. Therefore, in order to implement effective changes, it is necessary to diagnose such aspects and, subsequently, incorporate them to the change program. As a part of the foregoing, this approach does not only see members of the organization as role players, but as **integral persons**, about whom it is necessary to analyze perceptions, values, emotions, motivations. Therefore, the effectiveness of changes implemented depends on understanding and proper treatment of such psychosocial and socio-cultural aspects (Burke, 1988; Bennis, 1973; Beckhard, 1969; French and Bell, 1976).

According to this approach, in order to implement changes, instead of rationally convincing or merely having good technical designs, it is necessary to **resocialize** the members of the organization, to modify their cognitive and value schemes (Chin and Benne, 1983). In such sense, in the 80s, several change approaches were articulated around the "**organizational learning**" notion (Senge, 1992; Senge et al., 2000; Yeung et al., 1999). These are mostly followers of the Organizational Development tradition, and their respective statements are highly complementary. The Organizational Learning approach emphasizes reviewing mental models or schemes, and developing reflexivity; and techniques used therefore are similar to such of the Organizational Development approach.

An even more recent change modality, which is addressed to the same direction, is **Knowledge Management**, whose public crystallization had an outstanding expression in the publication of The Knowledge Creating Firm, by Nonaka and Takeuchi (1995), a work based on a thorough research on Japanese firms. "Knowledge Management" is the most recent approach, and is still in its first phase of development and application cycle.[47]

For the development of such cognitive and cultural changes, these approaches are mostly based on **teams**, with multiple conformations; giving rise, as in the case of Total Quality Management, to parallel structures, only that, in this case, these "structures" are much more fluid and changing, and their activities are also more diverse. They imply an intense degree of involvement and collaboration of members of the firm. In addition, Organizational Development programs usually include organizational diagnosis activities, typically comprising measurements of the organizational environment and surveys on corporate culture.

20% of surveyed firms had conducted organizational improvement activities that may be positioned within the Organizational Development perspective. One of them (SL21) is continuously constituting teams with members from its organizational units, and promoting involvement of employees and middle-level management through different, systematically designed work schemes, in order to review current situation, regarding services provided, reaction of customers, and the way to organize service delivery. They also use several measurements, for instance periodical measurements of organizational climate, which are used to provide feedback to the firm, and based on which results decisions are made with regard to leadership. In relation to the latter, managers that are repeatedly bad qualified are replaced, generating an "anticipated effect" on the remaining

[47] Systematic review on learning management contribution within the current socio-economic scenario may be found in OECD (2000).

managers who, anticipating such surveys, are more concerned about their employees. This scheme of changes is also supported by a strong training work: a specific training for what is expected to be done, connected to the needs that are being detected, and to different activities precisely focused on developing team skills or other competencies that are necessary for these collective review and involvement processes (425-445). In this firm, a corporate culture has been developed which is very consistent with this kind of activities. Effective appreciation of people and their contribution is expressed therein, which was widely recognized by interviewed employees.

In another firm (SL19), diagnoses have been conducted on organizational structure, with the support of a consulting firm. In this case, the approach was more technical and participation was restricted to upper levels. In this firm, the Human Resources Department also conducts studies on work environment and personnel motivation every two years.

Firms most frequently carry out some of these activities without having them comprised in a systematic organizational change program. Thus, for instance, 45.1% of firms have conducted **organizational climate measurements**. In some cases, this has been a specific activity and results have only been partially disseminated and scarcely used to orient decisions. In other firms, on the contrary (SL31, SL25), continuous measurements are made (for example, every year), comparisons are established - through time and among units -, based on which improvements are decided upon.

Use of surveys for employees, as a method for improvement, through their connection to decision-making processes, and involving different ways of **feedback information** to the members of the organization, is a widely used procedure in advanced capitalism countries. Thus, for example, in the U.S.A., the "**Survey Feedback**" – the generic term used to gather these activities, including

organizational climate surveys -, was applied to employees in 1987 by 68% of the 1,000 biggest firms. In 1996 proportion grew to 91%, that is, it has been used by almost all of the most advanced firms. The same research also shown that these activities covered increasingly larger amounts of employees: in 1996, in 46% of the firms, Survey Feedback activities involved more than 80% of total employees from the respective organization (Lawler, Mohrman and Ledford, 1998: 42, 43).

Application of such kinds of surveys in Chile, as can be seen in the table, is much lower. Moreover, in many cases, their results are not communicated to the personnel, or are only communicated at an executive level.

Organizational culture surveys, in turn, implying higher complexity, both for their design and for determining how to use their results, had been conducted by an extremely low number of firms (9.7%).

Organizational diagnosis is another action taken by 35.5% of the firms. In several cases, this diagnosis was connected to strategic planning work, as an input for strategy design, and has also been conducted as part of preparation for ISO 9000 certification (MM15, MM8).

3.6. Systematic Environment Analysis

We can distinguish as another type of study those concerning the environment situation: analysis of market, competition, prices, competitors' initiatives, economic changes, etc. Half of surveyed firms (51.7%) conducted such environment analysis on a systematic basis. This knowledge is evidently very necessary for any improvement process. In such sense, this type of analysis is usually comprised in Strategic Planning activities (ML7, ML11, SM22), and is also a good complement for Organizational Development tasks, whose focus is mostly internal.

However, several firms conducted these analysis more continuously and had specific units of the organization destined to such purposes (in the cases of Imex, Telefónica Mundo, SL27), or were supported (in the cases of SL20 and SL25) by external analysts that were in charge of this area. In a firm, the role played by the Board of Directors in this analysis was outstanding. Many of its members were also directors of other firms, allowing them to have a wide and comparative panorama (ML18).

Four firms of the sample carried out continuous and systematic environment monitoring, all of them from Services sector, facing strong competition (SL25, SL27, SL20, and SL31). In one of them (SL27), for example, an organizational unit was established in 2001 to monitor prices in their own premises compared to such of direct competition. That monitoring activity, that was implemented daily, allowed quick reaction before situations that were being detected. Before that, the interviewed manager recognized that firm reactions in this domain were very slow. On the other hand, the marketing area of the firm is continuously conducting brand perception surveys. In addition, they receive daily reports of what is being published in the press with regard to business actions undertaken by the competition (463-466).

For most of previous activities - strategic planning, ISO 9000, Organizational Development - firms used to hire **external consultants**. Thus, 67.8% of surveyed firms had hired such consultants.

3.7. Conclusions on implementation of global programs

Taking the set of organizational improvement programs that may be qualified as global, we can see that the most widely used are such directly referred to a better adjustment of the firm to the situation of its environment. Thus, strategic planning

is definitely the more widespread program, that has been being applied for years, specially in large firms, and which currently would seem to be imperative. Connected to the latter, we have the Environment Analysis, which is becoming more continuous, at least in several of the firms where it was applied. Benchmarking may also be included within this group of programs extending organizational observation toward the environment; in this case, directly to what other firms are doing, not only in the local scenario, aimed at learning from them.

Programs oriented to the inside of the company, on the contrary, have had lower dissemination and consolidation. The fact that Organizational Climate Survey is the most widespread program illustrates the above. This program is merely used to orient relatively specific decisions, especially with regard to personnel, and not as a part of a set of systematic activities seeking to improve organization. From the most articulated programs, those connected to the adoption of ISO 9000 standards have had bigger repercussions, in the last few years.. This is probably caused by the benefit obtained from having the certification for accessing other markets, and for improving the external image of the firm. That is, in spite of being an internal program, its main attractiveness seems to be based upon better market opportunities that it provides. Anyway, it is a program that has had a significant impact on internal arrangement and on training organization.

Difficulty of firms to assume improvement programs seems, in general, to be ratified, especially with internal programs being global and systematic. We usually see **limited and discontinued actions, with reduced use of the psychosocial technologies that have been developed in the last decades, and including a very limited involvement of employees**.

Except for Strategic Planning and ISO 9000, service firms apply these global change programs more than manufacturing firms. This could be attributed to the fact that they have higher sensitiveness to "soft", "psycho-social" dimensions,

which usually are the object of this kind of interventions. These would be caused by the typical centrality of social interaction and interpersonal competencies within the service business.

The constitution of parallel structures to review processes and their adjustment to environment needs, in order to generate, through them, changes for better effectiveness and efficiency - using Total Quality Management, Organizational Development, Process Reengineering, or other procedures - develops within the organization its systematic capabilities of **self-observation**, namely, its reflexivity and collective learning capacity. This is one of main drives of what we can call the post-Fordist firm, which provides its peculiar dynamism, and which allows it to adapt to the accelerated rhythm of changes in the environment. In this matter, Chilean firms have made significant changes, particularly in relation to strategic analysis and further review of the environment, although with important weaknesses regarding programs oriented toward the inside of the firm.

CHAPTER IV.
REDESIGN OF CONNECTIONS TO THE ENVIRONMENT AND TECHNOLOGICAL CHANGES

In the previous chapter, we referred to **global** change actions – strategy and structure redesign, and global programs - that affect all the organization. In this chapter and in the next, the focus is on fields that are more specific and at a more operating level of the organizational change. Thus, we will review changes occurred in the connections of the firm to its environment and those referred to the implementation of new technologies, both for production and for communication and management processes.

1. Changes in firm's connections to its environment

In relation to this matter, we will consider (1) outsourcing and subcontracting actions and (2) new definitions and improvements in connections to key elements of the environment (vendors, subcontractors and customers) and their consequences within the organization.

1.1. Outsourcing and subcontracting

Outsourcing has been one of the more common and outstanding procedures that have came along the search for further flexibility, lightening and competitiveness of companies. It is a type of measure that has a number of repercussions contributing to achieve higher firms' efficiency and effectiveness, and help them to adjust to the competitive environment.

A central notion is having the firm focused on activities that are most substantial to it. According to the statement of some authors, firms have to concentrate and

develop their "**core competencies**", that is, the firm's cluster of skills and technologies which are inherent and distinctive, and that may represent the foundation for its competitiveness (Prahalad and Hamel, 1990). Thus, in relation to such processes that do not correspond or contribute to these "core competencies", thinking about outsourcing would be convenient. This perspective has been widely adopted by companies. In the case of the USA, the above mentioned study by Lawler, Mohrman and Ledford (1998: 86) detected that in 1996, 95% of the 1000 biggest companies, both manufacturing and service companies, had adopted this focusing on their core competencies as their improvement strategy. Complementarily, 91% of companies were outsourcing work not pertaining to their central competencies or that could be implemented at lower costs on an external basis.[48]

In addition to its benefits in efficiency and cost reduction, outsourcing of activities also provides the firm with further **flexibility to respond to demand variations**, whether seasonal or cyclical. In case of strong reduction in demand, it is easier for the firm to terminate the relationship with external units for which there is little work, than cut down its own internal units. Similarly, in the event of increased demand, the firm may appeal to external units, which, if conditions change later, may be "disconnected" without incurring costs, administrative obstacles or impairment of work climate - as the case would be if such units or personnel were internal.

All of the foregoing has allowed outsourcing to reach extensive dissemination throughout the world, and is one of the measures that have helped formatting today's typical companies: on one hand, they are lighter and more flexible; on the other, more interconnected to others through subcontracting networks. Outsourcing leads to "disintegration" processes in an opposite trend to that of the

[48] More specifically, 34% of companies was implementing outsourcing in a "wide extent", that is, at a large scale.

Fordist period. However, this disintegration results in the constitution of new coordination bonds, now between separate organizational units. The extent and shape in which this new connection occurrs, takes place, though, in many different ways. Differences are verified among countries, as well as among regions. In the case of Japanese keiretsu, complex vertical subcontracting chains are developed, with strong links among companies, which consider themselves as partners within a long-term horizon, exchanging information, and with focal firms providing technical assistance and personnel contribution to the others contained in the network (Womack, Jones and Roos, 1990; Dicken, 1998). In industrial districts from North Italy, links are similarly close, with significant circulation of personnel among companies. But, they assume a rather horizontal character among a number of small companies, and with the support of other local institutions, such as, municipalities and banks (Becattini, 1990).

Chile is certainly comprised in the worldwide trend. 67.7% of studied firms subcontracted some essential process or service that had previously been implemented within the firm.[49] The table below contains further detail of the situation.

[49] The National Labor Survey (ENCLA) applied to firms, made by a public agency (Dirección del Trabajo) shows general similarities with our results, although they are not strictly comparable. ENCLA 1999 reports, on one hand, existence of subcontracting in 68% of large companies and in 60% of medium companies; and, on the other hand, in 47% of the manufacturing sector for all sizes of companies (Espinosa and Damianovic, 2000: 32, 33).

TABLE IV.1: OUTSOURCING AND SUBCONTRACTING (% of companies that have implemented each change)

CHANGES IN PROCESS ORGANIZATION		TOTAL (%)	INDUSTRIAL SECTOR		SIZE	
			Manu-facturing (%)	Services (%)	Medium (%)	Large (%)
Subcontracting of part of its productive processes or other significant processes	Since 1990 approx.	67.7	47.1	92.9	56.3	80.0
Subcontracting of essential services	Since 1990 approx.	45.1	23.5	71.5	46.7	43.8
	Only in the last 3 years	16.1	5.9	28.6	26.7	6.3
Subcontracting of production activities (ONLY MANUFACTURING)	Since 1990 approx.	-	58.9	-	37.5	77.8
	Only in the last 3 years		11.8		0	22.2
Subcontracting of secondary services	Since 1990 approx.	90.3	94.5	85.7	80.0	100.0
	Only in the last 3 years	12.9	23.5	0	13.3	12.5
Technical assistance to subcontractors (ONLY MANUFACTURING)	Since 1990 approx.	-	10.0	-	20.0	0
	Only in the last 3 years		0		0	0

As can be seen, with regard to **secondary**, non-essential, **services** outsourcing and subcontracting is largely widespread reaching almost all of medium and large companies. 90.3% of companies outsource a few secondary services, and many of them outsource several services. In the case of large companies, this outsourcing is currently applied by all of them. Most usually, outsourced services are cleaning, security and catering. Transportation and mail management are also outsourced sometimes. They are activities that are not related at all to the central business or core competencies of the companies. Therefore, their outsourcing is a natural thing to them.

Although in not such a high proportion, subcontracting of **essential services** (45.1%) and of production activities in manufacturing companies (58.9%) has reached a similarly significant extent. Among the most outstanding services of

this nature, we can mention certain human resources management functions (on day-to-day matters, such as, payroll or social benefit management), accounting services, legal services, information technology services, customer service (through Call Centers), advertising, and marketing. In manufacturing companies, some subcontracted activities are: assembly, mechanical maintenance, elaboration of electric boards, paint coating and treatment, plastic processes, metal-mechanical processes, labeling, etc.

Since the late 1970s, a trend was already appreciated towards increase in subcontracting, at least in the machinery & metal industry (Abramo, Montero, Reinecke, 1997: 163)[50], and it was one of the most important organizational change actions taken by manufacturing companies in the early 90s (Geller and Ramos, 1997). That is, it has been a sustained and now consolidated practice.

Subcontracting networks

Given that trend, companies have become to be embedded in **subcontracting networks**. In total, the 32 surveyed companies were thus connected to approximately 114 companies that produced or provided services required for their day-to-day activities. This averages 3.6 subcontracted companies per each sample firm. 17.6% of manufacturing companies operated, in turn, as a subcontractor for another firm, elaborating relatively specialized equipment and projects.[51]

By reviewing characteristics of these networks in surveyed companies, **three main linking methods** may be distinguished:

[50] Increased subcontracting was made easier by some institutional changes that eliminated existing legal restrictions and negative economic effects (Abramo, Montero, Reinecke, 1997: 151, 152).

[51] We are only considering first level relationships. If second level relationships were also considered, that is, subcontracting relationships which are kept in turn by some of subcontractor companies, the network would be even larger.

(1) Around one third of relationships are **sporadic**, being primarily market relations. These are, therefore, **weak bonds**, whose only content is purchasing the respective product or service.

(2) Approximately 45% of relationships are seen as **relatively stable**, and in half of them, contracting companies require subcontractors to follow certain procedures, mostly with regard to quality standards. This situation especially occurred in companies that were going through the ISO 9000 certification process, which standards, as a manager told us, “force companies to have a paternity relation with contractors or vendors” (MM6, ML7 and MM8).

However, through these subcontracting links, except maybe in the case of some companies encouraged by ISO 9000 standards, significant information delivery processes, or learning development through the network did **not** exist. As a quantitative indicator, only 10.0% of companies provided any kind of technical assistance to its subcontractors. Attention in contracting firms is paid on evaluating the product or service that they receive, and they do not assume further responsibility for internal processes of the contractor firm. If insufficiencies are detected in the product or service, improvement mechanism will basically consist on replacement of the contractor firm. With all this, we are really far away from the concept of being “partners in a common business” found in Japanese keiretsu, or from trust and support levels of Italian manufacturing firms.[52]

[52] Other researches have also demonstrated weakness of these subcontracting links. Thus, Montero (1997: 262) concludes that “they configure "poor" ways of integration, in the sense that they produce low value added goods or services, with little market information, scarce cooperation among firms, and, specially, with too asymmetric relations with regard to contracting firms”.

(3) A third type of relationship, and the only one in which an effective sense of “firm network” arises clearly, a relationship through which synergy develops and value is added on a significant basis, is such constituted with subcontractor companies with which there are **ownership bonds** as well. Such kind of bond is the guarantee to make the relationship stronger in terms of information, coordination and technical support. An extreme case may be such of a machinery firm (ML18) that, in addition to common owners, shared its production manager with one of its subcontractors companies.

Another case, that is becoming widespread in holdings, consists of detaching some services – for example, information technology or human resources area - and concentrating them into an independent firm, owned by the holding, which provides later such services to the respective group of companies. One of the surveyed companies, from the telecommunications sector (SL31), was in that situation. The group of companies to which it belongs has a firm that provides them various services, especially in the human resources area. They range from routine matters, such as compensation management to others that are more complex, like training, staff evaluation, mobility of employees within companies of the group, and communication via Intranet. For these purposes, operations are carried out, on one hand, through formal agreements and evaluating results, just like independent companies. Nevertheless, at the same time, in view of common ownership, there is a concern about developing a good communication and close relationship; additionally, this “external” unit responds to orientations and policies dictated by the corporate center (1151, 1152). In such a way, although this is an independent firm that may offer its services to other companies not

belonging to the group, it is embedded in a network with strong ties, through which multiple contents "flow".

This firm that provides services to the remaining of the holding, resulted from an outsourcing of activities of each one of them, which contributed with personnel and resources for its constitution. However, this new firm is **within** the holding. This may be interpreted as a partial outsourcing. It reflects a sort of displacement of borders; but without changing their nature: they still are boundaries constituted by ownership. It is thus a peculiar type of network that, in the typological axis of coordination mechanisms, ranging from market to hierarchy, is very close and still stuck to the "hierarchy" pole.

From all connections, around a fourth corresponded to this third type, that is, to relations reinforced by ownership webs.[53]

Certainly, such relationships are not excluding among each other. The same firm may keep the three types of relationship. However, the outstanding thing is that the third type is the only one that, at least now, proves to be taking advantage from network potentialities. Relationships in which ownership is not involved are much more permeated by a market logic than by the network orientation. And, in what they have of networks, it prevails a short-term instrumentality, with merely economic criteria, with a limited development of trust and, in consequence, with little information flow and knowledge transfer. Thus, except for ownership-

[53] The typification stated here is based on characteristics of the **relationship**. Abramo, Montero and Reinecke (1997: 165), in turn, make a typification emphasizing **characteristics of the subcontractor firm**, although some of these characteristics refer also to the relationship with the contracting firm: (1) companies with primary capacities, dedicated to low value added tasks; (2) dependent specialized subcontractors, with a high technology level, that receive assistance technical assistance and credits for their working capital, and have to respond to precise technical specifications; (3) autonomous specialized subcontractors, with technological mastery, a high level of qualification and further independence. Both typifications could be complemented.

connected networks, significant development of **horizontal** relationships was not found.

All of the foregoing leads us to the conclusion that, although subcontracting relationships, derived from outsourcing widespread adoption, have increased, this has usually given rise to **weak** networks, and from which **no full advantage is taken**, **except when supported by ownership links.**

Within this perspective, Wormald (1999) has hypothetically suggested that there would be a trend, among companies without ownership links, towards the constitution of subcontracting **pyramidal networks**, with strong power differentials and dependence bonds. This is also a type of network in which trust is subordinated to economic dependence, and where instrumentality and coactivity are major aspects within relationships.

Activities transferred outside the firm's hierarchical control result in a consequent **increase in uncertainty**. The firm that applies outsourcing is subjected to several risks: difficulties in coordination, problems with deadlines, opportunism of subcontractors, etc.[54] Many of surveyed firms had faced serious problems concerning these matters, whether in relation to quality, quantity or timing of provided product or service. In a firm, as recognized by its production manager, the extent of outsourcing was excessive, and even central processes were included therein. The following is his description:

> "I arrived to the firm three years ago and the firm was entirely outsourced, in the sense that all productive processes were carried out outside (...). Unfortunately, that was not so good. Many strategic processes were outsourced... then, the whole thing was quite bad until three years ago. If

[54] A systematic approach of this subject, in terms of involved "transaction costs", is the already classic by Williamsom (1981).

you think that we manufactured 300 articles, having these 300 articles dispersed in plants located in San Bernardo, Gran Avenida, Quinta Normal, Quilicura .... it was crazy!... no matter how good your information system were, managing all that became irrational".

"Finally, all that situation affected costs, and affected service quality. For example, we ended year 1999 with as much as 70% or 60% in order completion, that is, an order arrived 30 days in advance, and in these 30 days, we just reached 70 or 80% [of completion]"

When this outsourcing was carried out, "part of the personnel was fired, but another part was transferred with their equipment and stuff to subcontracting companies. For example, (...) we looked for some firms having adequate facilities (to manufacture a certain product). Then. [ML18] provided their ownesr with equipment and people, and said them 'look, here you are; they [the former employees] know how to do it, how to manufacture it, and I will place an order for a determined amount and you will deliver that amount to me'... However, later, the story changed. Prices were established and those persons said 'I have a contract, but with these prices, my results are not what I expected'. In addition, they wanted to add some more margin, and quality problems started to appear, and also product rejections. Finally, there were too many things that caused delays in product deliveries (...) It was awful".

"(...) Many of the people that we had here were transferred with the same salaries to those companies..., their wages were not high, but they were high for the guys from the external firms who wanted to work at a minimum cost. [Thus,] many of these people didn't accept to pay those wages, and hired other people, with much lower salaries. And finally, the result was that quality just collapsed" (1015, 1016).

That was the situation of the firm for a couple of years. Then, they started to bring back again those processes. Now, they only outsource activities in which they are clearly not specialized. This has allowed them regain satisfactory quality and fulfillment of established deadlines.

Many of outsourcing dangers are reflected in the description of what this firm went through. The situation of workers is also clearly expressed: from being fired, they are eventually hired again in subcontractor companies, but under worse work conditions.

Many studies discuss further **impairment of work conditions** in subcontracting companies compared to their respective parent companies. Higher **distance** from the main firm in productive links results in more precarious work – in terms of salary, type of contracts, qualification, opportunity to obtain training, social protection, and collective bargaining (Abramo, 1997). This precarious situation also depends on the **type of subcontractor**. In the case of subcontracting firms with higher technological level, with more specialization, with more autonomy, with products or services which are more difficult to replace, and with a higher negotiation power within the network, workers are likely to find better conditions (Abramo, Montero, Reinecke, 1997; Wormald, 1999).

Contingent personnel and vendor companies

Outsourcing has also another manifestation, which could be called “staff outsourcing”. Part of “lightening” and organizational flexibility is obtained by firms counting on **contingent personnel** that varies in accordance with the evolution of organizational needs. As explained by a bank manager (SL20): “[In a certain branch] you have a payroll of four tellers, and in peak days, for example, Mondays, VAT pay days, and tax pay days at the end of the month, you hire

external tellers, [provided] by external companies.... I could have permanently two extra tellers, but then I would be over-staffed, and [if demand is reduced], profitability is reduced, and I have to fire them. That is what external companies are for. I have just the staff I need and I hire some guys for peak days. This is how it works" (1127). Thus, the external firm providing temporary workers allows the required flexibility to cope with demand variation, and the receptor firm may operate using a fitted staff. A similar logic is applied for other temporary workers in the bank, such as, checking account salespeople, watchmen, etc.

A portion of this personnel is directly hired by the firm, as temporary personnel. Another portion comes from **firms that supply workers**. There are certain significant differences among these vendor companies. In some of them, as we discussed in relation to subcontractor companies, user companies have an equity share. Other vendor companies, in turn, even without such ownership bond, are highly dependent on the user firm, which is its only or main customer. A third type of vendor firm is made up by companies that do not have any ownership or dependence relationships with the user (Echeverría et al., 2001: 71-74).

A second distinction, crossing the previous one, is between (1) vendor companies that have an effective specialization in managing the contingent of workers that they supply, in terms of proper selection, evaluation and control of their performance, and related functions, and, on the other hand, (2) vendor companies that play a mere **brokerage role**, or "interposition", without any specific contribution to the process, without any value added. In this second case, the advantage they offer to the contracting firm consists of having staff available that is not subject to the benefits and compensations of full-time workers. Thus, in

this alternative, cost reduction is maybe the most important aspect. (Echeverría et al, 2001: 74-80). [55]

These various interconnection modalities were seen in the firms studied, but we could not quantify the relative weight or degree of use of each one. What was clear was the significant extent reached by this contingent personnel, as a proportion of total personnel of the firm. In the case of a service firm (SL19) that had approximately 6,000 stable employees, external personnel could amount to 5,000, that is, almost duplicating the amount of workers (1125). In a surveyed bank, the human resources manager estimated that the figure, in his case, was around 10% of stable personnel. In one manufacturing firm (ML9), taking into account all the firms of the holding, according to corporate documentes, in 2000, temporary workers accounted for 10.9% of the total (536 of 4,942). This is the range: from 10% to 80% of temporary personnel, having the highest proportions in the service sector.

A warning is advisable. We have referred to contingent personnel compared to "stable" personnel, but this “stability” is also relative. On the one hand, because this latter kind of personnel could also include some contractual modalities of restricted duration.[56] On the other hand, because companies may appeal to different causes to fire people. Therefore we could only talk about "relative stability". This will be further discussed when analyzing workers' experience.

[55] A detailed analysis of this type of companies and resulting problems for workers due to lack of a proper regulatory framework, is found in Echeverría et al. (2001).
[56] According to results of ENCLA 99, there would be 17.6% of corporate personnel that do not count on an indefinite contract. Such percentage includes fixed term contracts, contracts per work, and fee-based contracts (Espinosa and Damianovic, 2000: 23).

1.2. Processes for connecting with the environment and related internal changes

Outsourcing and development of subcontracting networks are two of the most significant processes of change that have been gradually growing since the 1970s (Abramo, Montero, Reinecke, 1997). Other relevant processes, also concerning to connections with the environment, correspond to relationships with suppliers and customers. Some important measures adopted by firms with this regard are shown in the table below.

TABLE IV.2: CHANGES IN PROCESSES OF CONNECTION WITH RELEVANT SECTORS OF THE ENVIRONMENT AND INTERNAL CONSEQUENCES (% of firms that have implemented each change)

CHANGES IN PROCESS ORGANIZATION		TOTAL (%)	INDUSTRIAL SECTOR		SIZE	
			Manu-facturing (%)	Services (%)	Medium (%)	Large (%)
Technical assistance to vendors	Since 1990 approx.	32.1	50.0	14.3	23.1	40.0
	Only in the last 3 years	10.7	21.4	0	7.7	13.3
Electronic connection with vendors to adjust deliveries to demand (ONLY SERVICES)	Since 1990 approx.	-	-	53.9	57.2	50.0
	Only in the last 3 years			23.1	28.6	16.7
Just in time production system (ONLY MANUFACTURING)	Since 1990 approx.	-	27.8	-	33.3	22.2
	Only in the last 3 years		11.1		0	22.2
Reengineering activities	Since 1990 approx.	41.9	38.9	46.2	20.0	62.5
	Only in the last 3 years	16.1	22.2	7.7	6.7	25.0
Changes in special layout of machines and of inventories (ONLY MANUFACTURING)	Since 1990 approx.	-	50.0	-	44.4	55.5
	Only in the last 3 years		11.1		33.3	44.4
Customer Relationship Management (CRM) (ONLY SERVICES)	Since 1990 approx.	-	-	35.7	0	71.4
	Only in the last 3 years			14.3	0	28.6
Compilation of opinions and suggestions from customers	Since 1990 approx.	67.7	70.6	64.3	53.4	81.3
	Only in the last 3 years	25.8	35.3	14.3	26.7	25.0

Vendor relations

To a certain extent, the terms “subcontractor” and vendor tend to overlap. Vendors provide the focal firm with certain raw materials and inputs this firm requires for its production process, service provision or product commercialization. A subcontractor also provides something to the target firm. However, in this case, that provision accounts for a portion of the target firm’s

activities that this latter could develop internally, which is or used to be customary. One could certainly state that any activity might be carried out within the firm - if this one accepts absorbing the costs related to growth and larger complexity stemming therefrom. This was precisely the prevailing trend in the early 20th century: companies used to undertake many "upstream" and "downstream" activities of the production process internally. Consequently, the aforementioned distinction separating subcontractors and vendors blur and change. Those roles are mostly relative: they are related to the most customary features of a particular industry, in a certain period of time and just as perceived by the actors: in other words, they could well be referred to sociohistorical limits.[57]

Accordingly, when nowadays we refer to vendors, we are actually designating companies that provide something to the target firm that usually and traditionally has not been developed by that firm in an internal manner.

However, as we previously saw, in most cases relationships with subcontractors tends to be a shallow, fairly unsupported and not poised to mutual collaboration, while in the case of vendors this bond has been strengthened. Thus, as an example, 32.1% of companies report technical assistance to vendors, a figure that is currently on the rise. This is not, however, the prevailing approach and three major corporate trends may be identified regarding vendors.

(1) The **traditional** and still widespread approach consists in addressing only the expected product specifications and ultimately assessing the product or service purchased, which strictly assumes that the vendor is liable for

[57] These terminological problems arose in the interviews, where comments on subcontractors and vendors usually overlapped. Some of those issues remain in our current interpretations and development. Thus, we might have combined the analysis concerning to both groups of external firms. Yet, we keep this differentiation because of their diverse origin and the different effects they might result in. Subcontractors are usually related to the outsourcing process; consequently, they might be thought as companies offering better conditions for constructing networks than provider firms, which traditionally have been external.

the rest of the process. Therefore, providing technical assistance is out of question. In a certain manager's words, "I'm hiring the one who is skilled in what I need to be done". The **single market tie** is highlighted.[58]

(2) The second perspective has consisted of looking for larger improvement of the relationship, greater **efficiency in the supply chain**, through improving the communication system by applying computer programs aimed at optimizing the reception, distribution, storage and restocking of products (ML18, SL19), yet not rendering the relationship any closer. Anyway, these spreading changes in logistics imply major changes in relationships, at least in their technical dimension.

(3) The third, still emerging approach includes establishing **collaborative relations** with vendors. Accordingly, a food firm (ML3), for example, counts on a technician devoted to supporting certain vendors regarding its production procedures (1206). In the case of another manufacturing firm (ML7), the Quality Manager usually visits vendors, checks on processes, provides information and technical assistance, particularly to the small-scale workshops working for the firm. A trade firm (SL25) keeps ongoing contact with its vendors and, as reported by interviewees, they are constantly training them, for example on packaging systems (1230). Another firm's manager (MM17) discriminated between large vendors, with which their relationship was based on the market, and smaller vendors, to whom they provide technical assistance and even financial support (1296).[59] In several cases (ML7, MM6), involvement in ISO 9000

[58] According to Suárez (1996: 72) in most Chilean companies, the prevailing approach as to vendor and customer relations is a cunning relationship, "somehow antagonistic or at least distrustful between the parties, which is evidenced by fairly short contracts, multiple vendors for one single input and little firm – vendor or firm – distributor cooperation".

[59] A comprehensive case study carried out at a large machine tool firm showed that this firm had progressed toward this collaborative relationship approach with vendors, even though with different characteristics, depending on the relevant vendor: in the case of large vendors,

certification has acted as driver to developing concern for vendors. Another firm (ML4) had taken part in a Vendor Development Program. Vendors were provided training on quality management, production and financial management. This program was funded by the companies involved and sponsored by Corfo (1220).

Those actions contribute to shape a longer-term collaboration relationship where inter-firm networks actually stem from. Mutual benefits result from this structure, which are increasingly evident for those companies undertaking those actions. A telecom firm (SL31)'s manager acknowledged that until lately they had not realized how significant such collaboration was. But nowadays, they rely on information exchange through the network, assessing continuously the process, and, hence, as expressed by this manager "they learn and we learn" (1240).

Both their relationship with subcontractors and vendors as part of an intense competition environment is subject to pressure for the development of higher efficiency. As we have already seen, some companies look forward to achieving higher efficiency by means of market mechanisms, while others rely on building more collaborative relationships. Either way, certain logic has become widespread: **cutting stocks** at the target firm, to which end they foster better logistics design. A singularity of the typical Fordist firm is bearing extreme **protection against uncertainty**. To a certain extent, this involved counting on plenty of resources. In particular, this type of firm used to count on large stocks allowing it to meet likely rise in demand and, on the other hand, to cut the risks related to possible internal flaws or problems within the firm that might result in smaller production volumes. The extremely competitive context in which

developing a bilateral knowledge flow; in the case of small vendors, they had provided them with information and even equipment, however no technology feedback processes were observed with small vendors or with their distribution companies (Katz y Vera, 1997: 44, 45).

companies have had to survive over the last decades necessarily forced them to strive to both cut sources of expenditure and turn theirselves into lighter firms. The investigated firms were widely coincident in this trend to minimize inventories. Most of them had been cutting their stocks, preventing overstocking, reducing "safety stocks", rationalizing procurement, adjusting purchase orders, and cutting down provisioning cycles (ML3, MM6, MM8, MM12, SM24, SL31, ML10, SM29). [60]

Nevertheless, it is advisable to distinguish between incoming and outgoing stock. Minimizing outgoing stocks forces connection with customers to be improved so that their level of demand may be duly anticipated and the relevant purchase orders may be sent backwards, thus activating the corresponding production processes required to ensure availability of the quantities required within a satisfactory period. On the other hand, cutting incoming stocks requires improved supply chain design and better vendor communication mechanisms.

In either case, the lower protective excess availability, the more evident problem and inefficiency sources become – any delay or lag may have a serious impact on deliveries to customers - and, therefore, it tends to generate revision and improvement activities. This is one of the effects of cutting inventories that makes it a supplementary measure for ongoing improvement procedures.

This is the fundamental **"Just-in-Time"** production logic: producing only what is strictly necessary to meet demand, which activates the required production processes and, subsequently, demands to vendors. However, this is a highly demanding procedure for all the employees involved. In the case of Japanese companies, like Toyota, where this procedure was born, at first it took them many

[60] The findings of a survey applied to 512 manufacturing plants all over the country showed that concerning management of production processes, the two largest innovations were inventory management – significant changes in 74.2% of companies - and introduction of IT in production processes – significant changes in 69.0% of companies (Crespi y Herrera, 1998: 66, 67).

years to achieve proper functioning within the firm and, later, to build this kind of relationships with vendors (Coriat, 1992). Among Chilean companies, it is evident that the overall stock minimization logic has come to stay. There are very few companies, however, stating that they effectively rely on a "just-in-time" approach. In 27.8% of manufacturing companies, managers reported that this approach was under application, even though if we were rigorous regarding the assessment of what they do, a more accurate and representative figure would be below 20%.

A critical means to facilitate these changes have been the computer programs making calculation and planning of deliveries and time frames easier regarding all the items required and, jointly but more particularly concerning vendors, the digital communications networks allowing information and follow-up of all process stages to be carried out. This feature was a highlight among the survey companies, although the number of equipment varied from one firm to the other.

Several managers interviewed pointed out a number of problems inherent to local reality that hindered higher development of Just-in-Time procedures applied to vendor relations:

(1) Problems related to the **quality of products supplied** by local vendors, which resulted in delays and rejections. A machinery company (MM14)'s manager explained about his firm: Formerly, they used to count on long-term stock, up to three years. Forced by the crisis, however, a couple of years ago they started to operate "with no stock" at all. Thus, instead of facing large disbursements, they could order products and pay as they sold. To that end, they began buying to local vendors rather than to foreign ones that required purchasing larger volumes. However, despite the financial benefits of this, corporate decision-makers were planning to revert it "because Chilean supply is very deficient; for example, iron is our

main input; the South African iron we used to purchase is elaborated in 3 by 1 meters metal sheets, with the exact dimensions; all you have to do is measure, cut the pieces and everything works fine. Chilean iron comes in a 3005 by 1008 centimeters format on one side and 1001 centimeters on the other side. Workers take 25% longer in cutting one of these sheets as compared to what they used to take and they have no certainty the result will be satisfactory. Then, we are going back [after two years operating with local vendors] to contact with our old vendors in South Africa, because we are sure they are capable of supplying iron of a fairly good quality, and South African companies offer the best price of the market" (1057).

(2) Problems related to **deadlines**. Vendor or subcontracting firms have trouble in order to accurately meet supply deadlines. This is applicable to small-scale companies with limited resources, but also and particularly to large vendors, whose size and power prevent the purchaser from setting terms to them. Therefore, a production manager of a firm making large efforts to cut stocks emphasized that working effectively based on Just-in-Time was simply not possible (ML18). For example –he said- "for me it's not worth it telling CAP [a very big provider]: 'I need your supplies in a Just-in-Time way' if CAP doesn't care at all about my requirement. CAP tells me: 'you need to place your order for the following quarter…. and I will supply your order within the month you requested, yet, it may well be on the 1st or the 30th', and that's it" (1064, 1065).

(3) Another firm (ML9) stressed the "**coordination** hurdles existing in Chile", which may become rather serious if the Just in Time system is applied (1051). Those hurdles have different aspects: heterogeneity of production conditions at the firms involved, problems to extend communications networks to all the parties involved, and sociocultural obstacles to

develop collaborative relations. The latter issue once again raises the lack of trust problem we observed when dealing with subcontractor networks.

(4) **Variations in demand**, whenever they are radical, apply great pressure over companies left unprotected regarding those contingencies. One manager reported how some sudden demand rises had caused serious "panic in Production" and how they had had to work at full steam and overtime to catch up (1060).

A recurrent situation in several trading companies (SL25, SL27, SM24) refers to changes in supply methods that have been related to **Information and Communication Technology**. A usual tendency has been towards **centralizing** supplies and keeping minimum stock at stores only to meet very short-term sales -a few days. As a supermarket chain (SL25) officer explained, "Formerly [until 1997], we received 100% of products directly at every store, which at the end of the day, caused a real chaos. Every outlet usually received around 120 truckloads per day (…)". Information Technology development has allowed the new approach –combining centralization when receiving supplies and keeping minimum stock at outlets- to work. "Every department at stores counts on its own computers, check on their screens [facts on sales and available stock] and place their own orders]. (…) There is a break in activities at 2:00 PM; [sales over the last 24 hours are posted] and an automatic order is generated; this order accounts for the same amount sold, which is to be dispatched by the headquarters. However, [in addition] every department head has to check that all his orders are consistent [with estimated demand variations], either related to the next weekend, or to higher temperatures, hence more sandals need to be ordered…" (1227, 1228).

All together, management at the distribution headquarters also relies on computer means, "even the forklift driver –the interviewee said- counts on his

own monitor telling him ‘go to aisle such and such, take a package with such and such code…’. All activities are Information Technology based, later checking goes on until every product is dispatched” (1229).

In some cases, checking of orders and other corporate processes has involved Reengineering activities. We had already mentioned that very few companies have undertaken **global** Business Reengineering programs; yet, alternatively, a significant portion of these companies (41.9%) has carried out relatively focused and specific **reengineering activities** as a result of which activities have been redesigned and computerized, showing improved efficiency and lower staff requirements.

In addition, different modifications of processes have resulted in **plant and inventory layout reordering**, which actually occurred in 50% of the manufacturing companies.

Customer relations

We had previously referred to the several **structural** changes implemented by companies in order to adapt to their environment and, particularly, to their customers. Along with these changes, companies have also introduced other adjustments in their internal processes regarding this environment component.

A widespread activity is compilation of customers’ opinions and suggestions, which was carried out in 67.7% of companies, as reported by their respective managers. However, two relevant aspects of those activities should be highlighted. First, many of them are rather recent. Second, in a large number of companies, particularly manufacturing firms, those actions have an informal nature and sometimes, when customers are other firms, they rely on informal conversations established by some manager with customers (ML4, MM13,

MM14). Whenever this is the followed procedure, systematization and diffusion of information within firm is limited.

In those companies developing more systematized and formal processes, the measures or courses of action they resort to are diverse:

- Carrying out empirical studies –by means of surveys, focus groups and similar techniques- on a regular basis regarding customers' perceptions, either through a certain internal department or by means of external specialized firms (which is the case of SL25, SL31, SL21).

- Building and developing **customer assistance and guidance units**: Technical Assistance services, Customer Service department, Post-sales Service. Several companies had undertaken efforts on this line(SM28, SM29, ML11, SL21). In some of those companies, by using databases generated on customers, when dealing with a particular customer, all the information related to such customer could be available at once, with regard to the product or service provided to him. The general purpose of these units is centralizing and professionalizing customer service. This direct, customized attention would play a major role as to consumers, such as the regular Chilean consumer, who is rather reluctant to get informed through manuals or product literature. Such units, at the same time, if well designed, may provide valuable feedback to several corporate units, by managing the knowledge collected while interacting with customers. At SL25, for example, a Customer Service unit compiles all the data related to customer service and inherent problems, then it summarizes such data and makes it available to all corporate executives; in addition, it does follow-up on what has been made to answer the complaints received. In other companies, however, such feedback to the rest of the organization only seemed to have been partially implemented.

- Introducing **Customer Relationship Management (CRM)**. CRM is a computer technology aimed at making customer service easier, helping the firm get acquainted with its customers, store data on them and the kind of services they are provided, so that more appropriate courses of action could be taken accordingly. This may be partly achieved by setting up a Call Center, either internal or external. This technology involves a customer-oriented approach that looks forward to build tighter bonds with customers.[61] In that sense, for this computer tool to be effective, corporate officials and employees need to be simultaneously trained on customer orientation. 35.7% of the service companies sampled were developing some kind of CRM and all of them accounted for large-size corporations: it is in them where this technology is more unavoidable. However, even though these companies counted on technological tools, the cultural change observed at them did not seem to have caught up with technology development. That was specifically what the Director of an advertising agency – OgilvyOne Chile - reported, as this firm is familiar with several companies that are currently implementing CRM: "As an expert in personalized relations with customers, I can observe and become concerned about CRM developing a life of its own, thus becoming something more technical and more cumbersome. It is virtually seen as an objective *per se*. The essence of the relationship seems to be no longer a major feature" [62].

- Building a **collaborative relationship with customers**. This is a deeper – value-related, cognitive, cultural - change that may be inherent to any of the procedures referred to above, to all of them or to others; yet it is

[61] CRM promoters stress that more than a software this is an approach dealing with customer relations.
[62] Sergio Pineda, El Mercurio, June 28, 2002, B 5.

always aimed at building **more permanent and more solid relationships** with customers. When customers are other companies, this implies regular visits and assistance regarding their own processes – either production or trade. With all sorts of customers, this approach involves understanding their interests and needs beyond the sale of a particular product or service, and joining efforts to achieve mutual success while boosting one another. The foregoing involves organizational changes that are far from being easy. This requires changing salespeople's approaches, implementing more extensive training and larger professionalization of the personnel being in contact with customers, changing job descriptions and role design within the units involved, etc. Some of the companies included in this sample showed progress towards such direction, basically regarding firm customers, hurdles not absent, notwithstanding (SM24, SM28, SM23).

1.3. Conclusions on changes in firm – environment connections

In general, a marked outsourcing trend is observed referring to core production and service processes, as well as the search –although not always well defined- for focusing corporate efforts on its core competences. However, sometimes those actions only obey a rushed quest for cutting costs. Outsourcing, in turn, results in increasing subcontractor networks, where most companies become embedded.

Another emphasized measure aimed at corporate lightening, cost cutting and flexibilization, is recruitment of contingent personnel, either directly or through recruiting agencies that accordingly become part – at least some of them - of the inter-firm networks held by target companies.

An operating criterion that had become quite popular among companies was that of cutting stocks and pursuing operation based on minimum resources, which had implied free and often rudimentary incorporation of the “Just-in-Time” logics. This approach implies growing away from the Fordist model which was based on cutting uncertainty as much as possible, on getting protection against uncertainty through multiple buffers in terms of material and human resources and stocks. Chilean companies are growing closer to **post-Fordist lightness and uncertainty**, and gradually moving farther from Fordist heaviness and security.

Both when dealing with subcontractors and vendors, weak ties abound; bonds that are intrinsically instrumental and close to market relations. As a result, the focal firm becomes involved with the others in a few aspects, such as quality control; but such involvement bears minimum diffusion of knowledge and almost no joint development of knowledge. In contrast with the typical situation in other subcontractor networks, like the Japanese ones, here one cannot observe any sharing of information and technical support strengthening bonds for a long-term relationship, development of mutually beneficial collaboration and a notion of being partners. This means that Chilean “subcontractor networks” usually only contribute with a minimal portion of their network-related potential, and their functioning remains pervaded by the market logic. Notwithstanding, greater development of collaborative bonds could be observed among some companies in the case of vendors.

More substantial relations, involving a larger flow of knowledge, mutual contribution and based on a partnership notion, seemed to be clearly identifiable whenever **ownership ties** were involved.

Major progress, although rather recent, has been achieved with regard to customers. In some cases, such progress was related to the use of leading edge

technology like CRM; in others, ties still proved to be rather informal and highly non-systematic.

As to corporate connection processes with subcontractors, vendors and customers, we can observe recurrence of the same pattern, namely, the **difficulty to build collaboration networks and bonds**, the explanation of which is likely to be found in the sociocultural context. We have found a polarization between, on one side, firms unable of collaborating and building networks, connected with weak ties prone to market relations; and, on the other side, groups of firms related strongly to each other by means of ownership ties that seem to be the most effective antidote - in this sociocultural context - to counteract distrust.

Among the hurdles preventing the development of strong subcontractor and vendor networks beyond the security provided by ownership ties, a climate of lack of trust seemingly plays a role that would stem from cultural roots or background. Several studies on this country evidence a **weak collective trust**. UNDP 1998 report on Chile informed about the prevalence of a "weak sociability", "high level of distrust" and "poor associativeness" (UNDP, 1998: 216). The survey applied by this organization for the purposes of its 2000 report confirmed such characteristics; thus, for example, 63% of respondents showed **distrust** regarding other people, a result allowing statistical generalization to all the country.[63]

This low level of trust, when related to the worker-manager relationship, strongly depends on the experience lived in still recent periods of time, when social conflicts abound under the Unidad Popular government and along the military dictatorship. However, when it comes to inter-firm relations, that is to say, among

[63] The interpersonal trust percentage prevailing in Chile – 32.4% - is far from advanced-capitalism country levels (Sweden: 66%, Norway: 65%, USA: 50%) (UNDP, 2000: 144, 286).

managers or entrepreneurs, what can explain it? A local culture of distrust regarding the stranger, as stated in the Valenzuela & Cousiño thesis (2000)? These authors hold that a social relations model based on **sociability** and familiarity prevails in Chile, as opposed to the US, where an **associativeness** model prevails, founded on the willingness to trust in the stranger or unfamiliar. In the **sociability model**, which is deeply rooted in the protective and collectivistic Catholic religion, relationships among people who know each other or are connected by familistic bounds tend to be strengthened, while those unknown are usually distrusted, unless they become "familiarized". The American Protestant-based **associativeness model** assumes free and independent individuals who need and develop poise for trusting in the stranger. Empirical findings show pretty low associativeness levels in Chile, well below American figures (cf. Valenzuela & Cousiño, 2000: 333).[64] Based on such overall background, the authors conclude that "trust is a culturally rooted predisposition belonging to a liberally-coined modernity we have never actually experienced".

Regarding inter-firm relations, institutional factors should also be taken into account. For a long time, a strongly centralized institutional order prevailed, where the State concentrated the creation of relationships among companies and coordination thereof, while horizontal and autonomous relations were relatively reduced. Transition to a new type of relations, where the State significantly withdraws and the market dominates, has occurred during a rather short period, from the historical point of view, a couple of decades. In such a way, the collective learning of new forms of relationship is merely incipient and insufficient.

In this institutional framework and given the weak associativeness shown by companies, it is not unusual that some of the largest coordination efforts among the actions of groups of firms were originated in the State and implemented

[64] It should be pointed out that sociability, although comparatively higher than in US, shows weak and deteriorating levels in other surveys (cf. Carrasco & García, 2000; UNDP, 2000).

through Corfo and its “Profo” projects that involve public subsidies fostering entrepreneurial network building (Dini, 1996).[65] In other words, following the **centralist tradition**, the State looks forward to offsetting sociocultural deficits that either delay or hinder building interfirm networks and obtaining benefit out of them, and aims at developing trust-based relationships. This seems to be a promising path, even though no updated assessments are available on the actual contribution of these projects after one decade under operation.

In any case, regardless of which its origins may be – cultural, institutional or other - the fact is that the lack of trust is a characteristic taking its toll from corporate networks among Chilean companies. Accordingly, such networks are mostly weak and encompass hierarchical, pyramidal relations. The strongest ones, those taking best advantage of likely synergies are the ones overcoming the trust issue through ownership ties, say, those that “assimilate the stranger” rather than associate and collaborate with him.

[65] Between 1991 and 1996 approximately 250 projects were implemented, covering around 3,700 companies by 1996 (Dini, 1996: 145).

2.Communication and information technology

The technological dimension of corporate post-Fordist changes is basically constituted by information and communication technology **(ICT)**. Its applications have progressively expanded through corporate processes, covering from production tasks at manufacturing facilities, to general corporate management processes, further allowing several electronic communication and interaction forms to be established and strengthening the development of outside networks.

Since its earliest significant corporate manifestations in the 60s and until now, this technology has undergone dramatic changes. This is also true for its corporate potentialities. Nowadays, with the development of immensely versatile digital networks, the **integration** of many applications formerly based on a particular or local focus concerning corporate activities is currently possible and connections tend to be **in real time**. On the other hand, the tools that were initially useful to process and store data, and generate support data to decision-making, are today increasingly used in **knowledge management**. In that sense, they are fundamentally used for: (i) allowing interaction and development of synergies among individuals scattered all over the firm, whose experience and knowledge may be supplementary; (ii) digitally gathering and articulating job and organizational experiences by means of electronic records upon occurrence; (iii) using such records for diffusing information throughout the firm and in training new members of the firm; (iv) establishing technical assistance networks for corporate members (Davenport & Prusak, 2000; Constant, Sproull & Kiesler, 1997; Orlikowski, 1995).

At the current point of its evolution, as a tool of knowledge management and development of networks within the firm and with other institutions, communication and information technology accounts for the technological means

inherent to the new organizational stage or paradigm; it is the **technological tool of post-Fordism** that spurs its production flexibilization, structural lightening, globalization, innovation speedup, reflexivity, connectivity with customers, development of strategic alliances, creation of worldwide production chains, etc.

How much into this ICT logics are Chilean companies? We will cover this subject by reviewing four aspects of how this technology is used in a firm; its application (1) for managerial purposes; (2) to the service of the production process; (3) for internal communications; and (4) for outside connections.

2.1. Information technology applied to the managerial process

In terms of management computer packages, the most popular and most widely used application worldwide is **ERP** (Enterprise Resource Planning) permitting general management of the firm. These are computer programs aimed at automating and optimizing management of the corresponding operations by taking advantage of internationally compiled knowledge on a certain corporate area or process. These programs typically encompass several modules – finance, personnel administration, product development, inventory management, distribution, supply chain management, etc. - that may be purchased separately and incorporated according to the firm's needs or possibilities. According to estimations, in 1999, 70% of the 1,000 largest corporations in the US used ERP (Daft, 2001: 243).

These programs allow data critical to the firm to be managed on an integrated and real-time basis. Different members of the organization, responsible for certain areas, may count on totally updated data on what is going on and such data is arranged so that the overall situation may be understood and analyzed. In addition, as several modules are added, the top management may count on an overview of the daily operation of the firm, check on consistency with objectives

and introduce the necessary changes or revisions. Particularly, they show great potential for development of a better connection and coordination between the front office, namely, the areas having direct contact with customers, and the back office, say, internal departments of the organization.

The aforementioned raises the issue of relationship with the CRM referred to previously, which is aimed at managing data on customers and relations with them. CRM and ERP bear different origin and development, yet, eventually, they will certainly operate on an integrated basis. In fact, several ERP producers "have incorporated or acquired other companies focused on producing CRM, in order to integrate both solutions as part of their offer" (Trend Management, December 2002).

Buying the license and implementing this software, not including every single module, may involve investments usually amounting to between USD 100.00 and USD 300.00, which is less than half the cost just a few years ago. These amounts clearly require some degree of certainty regarding return on investments. In Chile, the use of ERP has begun to spread only recently, that is, over the last decade. Particularly, the computer adjustments Y2K flaws demanded were also used by various companies to incorporate these programs.

Seemingly, "standard packages" have gained ground as compared to solutions customized for a determined firm. Their largest advantage is that, as they are built by large international corporations, these programs encompass the expertise acquired through leading customers in their own industries. In other words, these programs incorporate the knowledge resulting from "best practices" worldwide. Evidently, this uniformity requires a number of adjustments in order to incorporate legal, administrative and financial particularities of the countries and places where they will be applied. On the other hand, the relative tightness stemming from standardization puts some pressure on the user firm to change its

procedures or forms to conceive some management aspects. In that sense, software leads to learning new ways to see and act among firm members. It is, accordingly, a powerful tool of organizational change and international standardization.

A survey carried out by the Ministry of Economy (2002), including a representative sample of various sectors of the economic activity, allows the scope of computer applications related to management to be pinpointed.[66] Findings are shown in the following table.

TABLE IV.3: USE OF SOFTWARE IN MANAGEMENT TASKS (% of firms using each type of software)

	FIRM SIZE (in Th UF)			
	Small (2.4-25)	**Small to Medium (25-50)**	**Medium (50-100)**	**Large (100-300)**
Standard package	11.6	24.7	28.3	35.8
Customized	11.2	14.9	16.7	23.8
Total use (standard and customized)	22.8	39.7	45.7	60.3

Source: Ministry of Economy (2002)

It may be observed that the use of these programs has spread countrywide among medium-sized and large companies, over half of which are currently relying on this kind of software. In addition, another highlight is pervasiveness of standard packages, such as the various ERPs available in the market. In fact, 60% of the companies subject to our study used a certain type of ERP, being

[66] This study was based on the application of a survey to a probabilistic sample of 3,134 companies from 12 activity sectors, with sales ranging from UF 2,401 to UF 300,000. Strictly speaking, these figures account for "computerized" companies; however, in the case of medium and large companies, they fairly represent the total figure – 97.1% and 98.4%, respectively. The situation among small-size companies is different, though: 58.2%.

SAP the most popular one, although those of J D Edwards, QAD, and Solomon were also used.

Most of the companies in our sample had introduced these programs very recently and some companies not using ERP yet claimed to be giving it a thought, while others had postponed their decision because of the costs involved. At all events, they all shared a sense of “lack” for that matter. These programs are already widely known in the local entrepreneurial world and they are acknowledged as a great contribution to corporate productivity and competitiveness. As a result, purchasing these solutions seems to be only a matter of time and finding the most suitable conditions for companies.

Reviewing IT application in management processes beyond management packages, most of the studied companies (93.7%) seem to have undergone changes, regardless of the extent involved. 51.7% of these companies reported major changes, which is greatly associated to the application of said computer packages, since as stated by several manager, when using it, they have been forced to changing the way they do regular procedures, which is also true for other members of the organization. In addition, for some companies these changes have played a major role in the development of their strategy; they have contributed to logistics changes, quest for larger efficiency, sidewise connections and greater global integration, among others.

In order to introduce these programs in the organization and to achieve the cognitive adaptation needed, particular training efforts have been required so that employees be prepared to cope with new technology. When these efforts fail to be efficient, problems eventually arise. For example, a trade firm (SM23) attempted to implement a computer system to manage storage and distribution, yet they had to abandon the use of the system since employees would remain applying traditional procedures –which they were familiar with and felt were best

to meet their needs, including sociability- and showed reluctant to using new methods.

Introduction of these changes has been dramatically fast, as evidenced by the case of a manufacturing firm (MM14), where until approximately 1997 the general manager and owner did not rely on a PC. It was only after his son took over that computers began to be introduced and IT systems design gained momentum.

Managers agree on the undeniable benefit resulting from applying this technology. As previously mentioned, technology has proven critical -in case of trading companies- to manage their supply networks. Other benefits were highlighted by one manager to a large service firm (SL19) concerning the improvement of human resources management efficiency. The system makes personnel distribution organization easier in customer service areas by relying on background data stored electronically. "The program we use in our outlets – this manager said - allows employees' days off to be scheduled and to decide how to reassign salespeople from one department to the other. That is to say, what the system does is, based on background data, telling me which day in, say, January, extra salespeople should be assigned to a determined department because a rise in sales is expected at that department, which is confirmed by historical data. Why? Perhaps because there was a certain event on that very day a year ago and sales increased. Consequently, more salespeople will be needed. Then, the system tells you 'take salespeople from such and such department, as they are [forecasted] to show little activity and reassign them to that department'" (1392).

Despite dissemination of these computer tools and the impact they are causing in terms of management practices, the companies subject to study do not clearly show that they are using these tools with an evident **knowledge management approach**. We may even claim that in very few of them, less than 15%, tools

were being used to articulate and redesign knowledge within the organization and regarding their customers, and, in theses cases, they do it without a very defined and deliberated approach.

2.2. Information technology applied to the production process

Over the early stages of IT development, many forecasts on its eventual development pointed to its introduction in manufacturing, thus involving growing automation processes, use of robotics and computer integrated manufacturing (CIM). Despite extensive progress, the early promises of automation and introduction of robotics have only been partially kept and the largest breakthroughs with the highest competitive potential of IT are occurring in the field of management and network development applications. In any case, automation of equipment and processes renders control easier and allows production efficiency and flexibility to be boosted.

Accordingly, although in most cases this application does not encompass competitive keys, companies are gradually increasing the use of automated machinery and procedures, some of which are turning into almost unavoidable standards (as the case of CAD).

A research project involving a representative sample of local manufacturing plants (Crespi & Herrera, 1998)[67], showed – in terms of IT applied to production - the findings specified in the following table.

[67] This survey encompassed 512 small, medium and large manufacturing firms. It should be pointed out that sampling error amounts to 5.1%, and confidence level of 95%.

TABLE IV.4: INFORMATION TECHNOLOGY APPLIED TO PRODUCTION (% of firms in every level of application)

	APPLICATION DEGREE			Total
	Nil (%)	Medium (%)	High (%)	
IT introduction in the production process	20.1	10.9	69.0	100.0 (512)
IT introduction in product design	23.4	45.6	31.0	100.0 (512)
Automation of the production process	15.6	14.6	69.8	100.0 (512)

Source: Survey on production and quality management within the manufacturing industry (CrespI & Herrera, 1998: 67).

Note: Values ranging from 4 to 3 and from 2 to 1 have been designated as "high" and "medium" degree, respectively, as they include no qualitative designation in the survey questionnaire and tables by these authors.

Figures show a major degree of IT introduction in production tasks. Only 20% of the companies sampled – including small-sized companies - had not joined this process, whereas almost 70% of such introduction had taken place to a high extent, as reported. In other words, even though the path and paces taken differ from those forecasted a couple of decades ago, a major level of microcomputer technology has been introduced in manufacturing production.

A more comprehensive overview of these IT applications in production is provided in section 3 of this chapter.

2.3. Information technology and internal corporate communications

A third scope of ICT refers to its contribution to **communications and network implementation**. Based on current technologies, the easiest form of such communications, i.e., the **basic level**, which is undoubtedly widespread is the e-

mail. More complex forms of communications and interaction – a **second level** - are those programs allowing and supporting remote teamwork, also know as groupware, such as Lotus Notes. These tools may allow electronic spaces to be designed, where employees scattered all over the world can gather and work; these "virtual offices" in the cyberspace support interaction and storage of the knowledge materials in use and results obtained. It also facilitate the creation and effectiveness of "communities of practice" that otherwise would be limited by space and time restrictions. A **third level** of technological solutions for internal corporate communications are Intranets, an organizational derivative of the Internet.

An **Intranet** is a digital network designed to be used by members of a firm, bearing access barriers to outsiders and using Internet communication protocols; in other words, codes like HTML language and others inherent to the World Wide Web, also relying on the regular browsers, hyperlinks and connection types allowing operation via telephone, cable, wireless or others, and interconnecting computers with any of the existing operating systems. In addition, Intranets set their external borders in a technological manner, which is also applicable to their internal accessibility levels, for which they use passwords and several "access profiles", depending on how critical or confidential the information or knowledge area involved is. Likewise, the outermost borders are usually protected by means of "firewalls" preventing penetration attempts or hackers' attacks.

Intranets are an evolutive expression of these technologies allowing all the aforementioned to be encompassed in a whole system. Thus, they allow e-mail networks, digital groups, and diverse corporate digital records, in which regularly data, information and knowledge is added and integrated. As part of this, they can incorporate data and information originating in ERPs, CRMs and other digital format tools. Due to its technological characteristics, the Intranet facilitates **ordering** of that increasingly complex **digital corporate memory** that is

gradually compiled and **disseminating** its contents. The Intranet may be used as a large multimedia library that grows larger and richer on a daily basis, which may be accessed from any point of the organization. That is actually a rather widespread notion on this network – which will later see as the one prevailing in our companies - yet it only encompasses one aspect of this complex "digital space" stemming from new technologies. The Intranet allows **digital interaction spaces** to be created. Through these spaces new knowledge may be generated by way of project groups, product development-dedicated groups or "communities of practice" devoted to more diffuse purposes; it also supports the implementation of weak ties networks for technical support within the organization that allow geographically isolated employees to join the corporate community. It constitutes a vertical and horizontal, upstream and downstream, communication and interaction digital space.

Besides, a well-built Intranet is the foundation for an efficient and effective Extranet. The **Extranet** is an "external" extension of these digital communications and interactions bound beyond corporate borders or those normally taken as firm borders. An Extranet involves connectivity with vendors, customers and other companies or organizations. This external space of potential interrelations has always existed, although now it acquires a concrete, operating and manageable form, when applying this technological means. It fosters a wide range of strategic possibilities, including worldwide alliances, international operations, and inter-firm networks.

Nevertheless, to take full advantage of those external possibilities through the Extranet, a properly built Intranet should exist. One cannot properly reply to those well-digitalized counterparts if internal digitalization is unable to catch up. It is the reiterated principle of "required variety". A complex extranet devoid of an Intranet supporting it, i.e., being able to meet the requirements of outside

counterparts will simply not work as it should and it may even generate a sense of lack of satisfaction among customers, vendors and other outsiders.

These different levels and focuses of operation shown by Intranets and Extranets may be summarized and sorted as shown in the following chart that was adapted from Papows (1998). Vertically, we have different aggregation levels: individual, group, global corporate, and organizational extension of relations with relevant entities of the respective environment. Horizontally, we go from less to more complexity. **Data** are mere structured records regarding a certain type of facts (for example, purchase frequency data, raw materials figures, absenteeism rate). **Information** accounts for a message sent in some way; it may involve analyzed data, with the added value of analysis, and meaning orienting the receptor (for example, information on the corporate sales trend over the last quarter that has been submitted to the various corporate managers). **Knowledge** is a concept involving more complexity than information and much more as compared to data. Knowledge involves integrating, organizing, and assessing patterns allowing selection and discrimination, and is supported on accumulated experience, (for example, the expertise the sales manager has acquired over time on the most suitable ways to do business with wholesalers).[68] The last level of complexity corresponds to **reflexivity** on knowledge itself; it means reviewing the structural constitution, generation and transformation of knowledge. It may be said that this is the field on which knowledge management operates or intends to operate (following with the prior example, this would be the case of a specialized consultant seeking to externalize and record the tacit knowledge that the sales manager holds, in order to review the cognitive criteria and models he uses, and be able, in a next step, to disseminate those elements, such objectified knowledge, among other members of the organization who can use them for their own performance).

[68] For further clarification on this difference of data, information and knowledge, see Davenport & Prusak (2000).

CHART 1: ELECTRONICALLY-OPERATED CORPORATE COMMUNICATIONS AND INTERACTION: INTRANETS & EXTRANETS

4. Extended firm (interconnected through the environment)	Business transactions with vendors and customers (online sales and purchase orders, etc.)	Communications with major external counterparts (vendors, research centers, customers, etc.)	Management and development of inter-organization and customer relations	Management and development considering the cyberspace as a business environment	**EXTRANET**
3. Internally-integrated firm	Data systems and applications at firm level	Communications at firm level (vertical and horizontal)	Management of corporate knowledge (development and mobilization of cognitive capital)	Innovation in organizational processes (e.g. process reengineering)	
2. Virtual group work	Data systems and applications for group use	Group communications beyond department borders	Collaboration among work groups	Innovation in group work processes	**INTRANET**
1. Interconnec-ted individual	Access, creation, entry and use of data	Access, creation and distribution of information	Training, education, expertise and socialization	Review and innovation in individual work practices	
	A. DATA	**B. INFORMATION**	**C. KNOWLEDGE**	**D. REFLEXIVITY AND INNOVATION**	

World history evolution has occurred – as shown in the chart - from the left bottom corner, along a both vertical and horizontal advance, thus gaining pervasiveness and complexity: from the databases of the 1950s and 1960s, to the management and executive information systems of the 1970s and 1980s, then to the networks of the 1990s, until reaching knowledge management, increasing complexity of external networks and reflexivity development. In that

framework, both countries and companies show different levels and paths of advancement.

Hence, this chart provides a useful map for the purposes of discussing the development of corporate external and internal activity digitalization. We will review the situation of local companies in this matter having that map in mind. A comprehensive reviewing would demand research to be exclusively focused on that objective. Nevertheless, the information compiled so far will prove useful to plot the most significant landmarks of the Chilean firms' digitalization.

The following table provides basic information on availability of some tools at the companies included in our research.

TABLE IV.5: INFORMATION TECHNOLOGY AND INTERNAL CORPORATE COMMUNICATIONS (% of firms using various ICT means)

		TOTAL	INDUSTRIAL SECTOR		SIZE	
		(%)	Manu-facturing (%)	Ser-vices (%)	Medium (%)	Large (%)
Internal communications via e-mail	Since 1990 approx.	90.7	88.9	92.9	87.6	93.8
	Last 3 years only	31.3	33.3	28.6	43.8	18.8
Implementation of an electronic communications network in the firm (not only e-mail)	Since 1990 approx.	29.6	26.7	33.3	21.4	38.5
	Last 3 years only	7.4	6.7	8.3	14.3	0
Intranet (internal corporate Web-format electronic communications network) allowing employees to be informed	Since 1990 approx.	50.0	37.5	64.3	26.6	73.3
	Last 3 years only	16.7	12.5	21.4	13.3	20.0
Intranet (Web format) allowing employees to operate on line	Since 1990 approx.	10.3	6.7	14.3	6.3	15.4
	Last 3 years only	3.4	6.7	0	6.3	0
Intranet allowing employees to form virtual teams (electronic meetings, virtual conference rooms) (SERVICES ONLY)	Since 1990 approx.	-	-	14.3	0	28.6
	Last 3 years only			0	0	0

Availability of these electronic means, however, does not portray the extent and form of use they have at every firm. The table below provides that information. The percentage of employees using any of the main ICT tools is shown. Figures in this table show distribution of companies according to use coverage of each technology.

TABLE IV.6: NUMBER OF EMPLOYEES WITH ACCESS TO ELECTRONIC COMMUNICATIONS MEANS WITHIN THE FIRM (% of firms per use ratio)

NUMBER OF EMPLOYEES WITH ACCESS	Using e-mail at work			Internet access	Intranet access			Access to posting information on the Intranet		
	Total (%)	Manufact. (%)	Serv. (%)	Serv. (%)	Total (%)	Man. (%)	Serv. (%)	Total (%)	Man. (%)	Serv. (%)
None	6.5	11.8	0	0	48.3	60.0	35.7	55.2	68.8	38.5
Very few (1-20%)	16.1	17.6	14.3	42.9	3.4	0	7.1	34.5	25.0	46.2
Some (21-40%)	32.3	41.2	21.4	21.4	27.6	33.3	21.4	3.4	6.3	0
About half (41-60%)	6.5	5.9	7.1	7.1	0	0	0	0	0	0
Most of them (61-80%)	12.9	11.8	14.3	7.1	0	0	0	0	0	0
Virtually all of them (81-100%)	25.8	11.8	42.9	21.4	20.7	6.7	35.7	6.9	0	15.4

Electronic mail

The use of e-mail –the basic level of connectivity- has undoubtedly become the norm for companies. 90.7% of firms use e-mail for internal communications. Among corporate managers and professionals, particularly in service companies, the e-mail is extensively used. In addition, in a large number of companies (38.7%) the e-mail is used by most employees (over 60%).

It may be observed that companies have progressively incorporated the use of e-mail over the last years, which leads us to think that this trend will prevail. In fact, in several companies, managers are already experiencing saturation

problems due to the large number of e-mails they receive and because an important portion of those e-mails are of little usefulness (SM26, ML18).

The e-mail –as well as the rest of the ICT tools available- cause gradual and subtle effects over organizational practices. It fosters relatively informal work communications, such as telephone ones, yet e-mail communications have the peculiarity that they survive, as written documents, being writing the classic way of formalization. That is to say, an **informal communication becomes formal**, as it is placed on record. In that sense, the e-mail causes partial and local corporate memory compilation facilitating that former communications be reviewed, and can be used as antecedent for organizational decisions and actions. Although this is not a deliberate process, it causes a slow socialization effect anyway.

Another effect of the e-mail occurs at the space-time dimension. The e-mail is an instant communication, free of the delays the old paper format was subject to. There is no retard in delivery and the sender expects a prompt reply in return, a promptness that is no longer measured in days, as in regular post, but in hours or even in minutes. On the other hand, e-mails follow the members of every organization, at least in case of corporate officers and professionals, as far as their homes, regardless of what time it is or if it is a weekend day. All the aforementioned involve much greater communications accessibility for the connected members of an organization that results in speedup of their "time lived".

Communications via e-mail are multidirectional. In fact, they are significantly useful for the development or reinforcement of horizontal corporate connections. They may also simplify and boost vertical relations. Concerning this last matter, however, in Chilean companies upstream communications tend to be restricted and only through formal channels. Even though technology allows an employee

to send e-mails up through the hierarchy, that is not what usually occurs. There are strong cultural barriers hampering the merest initiative to do so. The Intranet manager of a financial institution (SL20) commented that this simply does not happen; it is not part of the actions regarded as likely within the corporate context.

Intranet

Approximately half of corporate managers reported their companies counted on an Intranet. Nevertheless, it should be noted that many of such companies are still operating at very rudimentary or early stages of intranet development. Intranets main development was among major companies, where the contribution of this tool is both evident and significant, and also within service companies, where communications are highly valued as the corporate culture has traditionally been people-oriented.

Overall, the level of knowledge regarding Intranets **as a management tool** was also rather low. In fact, several managers interviewed did not clearly understand what an Intranet was or how it works or which are its uses and potentialities. The largest level of knowledge was found at some major service or manufacturing companies that belong to multinationals and, as such, are connected through worldwide Intranets.

The widest use local companies make of Intranet deals with **distributing information** among employees. In most cases, such information refers to administrative personnel-related matters: sick leaves, vacation leaves, applications, training, layoffs, attendance, etc. Some companies also used their Intranets to provide information on work's technical aspects: instructions on production processes, ISO 9000 procedures, specifications on products and services of the firm, etc. Likewise, general information was also disseminated,

such as the report of an interview to the general manager, country economic information, corporate official documents, firm news, and information on social or sports activities of the employees. In other cases, employees were allowed to complete some operations online. For example, in a service firm (SL20), one manager reported that “almost the entire personnel-related process was completed through the Intranet. Payrolls are submitted through the Intranet. Salary bonuses are automatically transferred to employees’ checking accounts and a notice is posted on the Intranet. Payrolls are signed through the Intranet as well. Vacation leaves are requested through the same channel and sick leaves are requested alike” (1492).

The findings of a survey on the Intranet of a large bank (BancoEstado), which has made outstanding efforts to informatize its processes, are representative of regular local Intranet contents and use. When checking visits to Intranet sites, findings show that during the period studied – June 2002 - the most extensively visited sites of this bank Intranet were as follows: the Regulations Center, with average 486 daily visits; Forms, with 211 daily visits; Circulars, with 172 daily visits; and News, with 122 daily visits. The least visited site – only 20 visits per day -, was a place where the members of this institution, with 6,000-employees, can freely post their comments and opinions (Martínez & Pérez, 2002: 76).

Those are, consequently, the widest uses of Intranet: making useful information accessible to everyone and simplifying routine processes.

Among companies related to multinationals, the Intranet also offered access to worldwide initiatives, considered “best practices”, carried out by some corporate unit, systematized so that such experience may serve other units (SL27, ML11).

On the other hand, except for a small percentage of companies, employees’ access to the Intranet was only granted to less than half of them.

Nonetheless, a more significant issue is the overall lack of interactivity found among the existing Intranets. A dismal percentage of companies –10.3%- allowed its employees to operate online over the Intranet and access to posting information was highly restricted. Thus, exclusively the top management and a few other officials were entitled to such use. The digital spaces generated did not encompass any kind of "virtual offices" to interconnect the actions of employees scattered throughout the organization that might take advantage of such connection for the development of their activities, which –in turn- could prove beneficial for the entire firm. The use of programs supporting instant communications, like ICQ or Messenger (chat), was rather reduced and mainly restricted to upper levels or certain professional officials.

Likewise, as to the internal social space of the firm, which is important for labor climate dynamics, corporate culture development and building of informal networks, Intranets lacked digital spaces that were effectively interactive. In the best of cases, companies counted on a few online mini-surveys, which were expected to be responded by employees; or have places where social and sports news could be posted on a sort of bulletin board.

One of the organizational or management difficulties companies have had to overcome regarding Intranets has been assigning Intranet responsible officials and adequate location in the corporate chart, particularly in terms of defining those reporting to them, scope of job responsibilities and form of connection with the other corporate units. Given the global significance of the Intranet, it is critical that the top management takes part in determining lines and forms of use of it, and, on the other hand, Intranets demand a good level of involvement of the various corporate departments. However, among the companies subject to study, those organizational formats showed little definition and rather primitive development.

Summing up, the Intranet is extensively used to put useful organizational information within firm members' reach and as an institutional communications means (vertical, downstream communications). Comparatively, its use as a work tool supporting interaction and development of work teams and virtual meetings is very weak. Finally, as a social meeting space, it is breaking new ground, although very slowly.

Virtual teams

Upon implementing this research, the development of virtual teams and work at electronic meeting points showed a timid presence at firm level. Only a handful of large service companies had shown some progress on this matter. The very notion of interaction and work at electronic locations did not seem to be well digested, let alone then its usefulness. This is not a particularity of our sample; we have seen a similar panorama in other companies, regarded as top of the line in industries such as mining and marketing. These sociotechnological developments have not entered the corporate cultures in this country.

External electronic connections

As mentioned previously, ICT leverages connections among companies, supports complex forms of interorganizational coordination forms and fosters connectivity between the firm and its customers. The survey carried out by the Ministry of Economy (2002) referred to herein above is representative at the national level and depicts the general state of external electronic connections. The universe of this survey is not coincident with ours, as it encompasses a number of industrial sectors that were not covered by us, such as hotels and restaurants, construction, private education (non-university level), transport, community and personal services. Notwithstanding, the Ministry's survey is the

first official study on this subject matter that has attempted to measure the use of this technology and, taking into consideration its representativeness and accuracy, it accounts for a useful benchmark. Relevant findings are shown in the table below:

TABLE IV.7: CORPORATE EXTERNAL ELECTRONIC CONNECTIONS – COUNTRYWISE SAMPLE – ALL NON-AGRICULTURAL INDUSTRIAL SECTORS (% of firms per connection type or use)

	TOTAL (*) (%)	SIZE (in Th UF)	
		Medium (50-100) (%)	Large (100-300) (%)
Web page	14.0	36.6	52.6
Connection with vendors	34.8	40.8	46.0
Prices and special offers are informed	61.7	50.2	60.7
Inputs and/or services are quoted	55.2	59.8	66.6
Inputs and/or services are purchased	27.8	34.3	30.5
Order status is reported	13.0	15.4	14.5
Connection with bank	69.7	79.2	84.5
Connection with utility firm	66.9	72.8	79.7
Connection with customers	30.2	35.0	42.7
Products and/or services are sold	18.3	20.3	17.9
	(3134)	(643)	(550)

Source: Ministry of Economy (2002).

(*) Note: Total also includes small-sized companies findings (2.4 – 25 ThUF) and small to medium companies (25 – 50 ThUF)

These findings are already useful for drawing some conclusions:

(1) Chilean companies already count on a significant external digital structure, at least regarding the number of electronic ties established. However, this fact does not say anything regarding the extent of use or tie qualities.

(2) The most generalized connections, which have also proven efficient, are not those between companies, but between a firm and a **bank or state-run entity**. It should be pointed out that the Chilean government has sustained a clear policy towards implementing this technology within its agencies and fostering firm – government connection through electronic means. Findings in this survey evidence that such policy would be attaining success.

(3) A large number of companies – over 40% in the case of medium and large companies - keep electronic ties with its vendors. Since these practices are addictive, an upward trend may be foreseen. Boundaries would only be established by lower connectivity and slower addition of computer components among the smallest companies. Yet, the increasing IT costs cuts forecasts that those hurdles will soon tend to drop.[69]

(4) Digital connection with customers has already been implemented, although not massively, as shown by the 30.2% of the firms keeping some kind of electronic communication with them. In the case of medium-sized and large companies, the number of firms having its own Web site also is

[69] According to estimations, savings in transactions such as bank ones whenever completed over digital networks are significant –roughly 89%; savings in sales between companies, in turn, would be approximately 10-20%, depending on the relevant economic sector (ILO, 2002 a: 89).

significant. It should be noted again that although connections are available, they are still very limited and usually rather unsophisticated - in many cases they mostly deal with e-mail service exclusively.

(5) The electronic network is more used for information purposes than for carrying out economic transactions. Over half of the companies resort to these connections to learn about products and services and to quote prices and only one third approximately uses them to purchase items. Finally, not over 20% uses them to sell products or services. [70]

Findings in our survey confirm the widespread extension electronic networks have reached so far and differences stem mainly from diversity of study universes. Our quantitative information is show in the table below.

[70] In any case, the percentage of transactions between companies over the Internet in Chile accounts for 2% of total transactions. 14.0% in the United States; 8.1% in Germany; 7.3% in Sweden; 6.3% in Italy; 5.8% in Japan (Santiago Chamber of Commerce, 2002: 54). E-commerce is only beginning in Chile, yet, it is not lagging significantly with respect to developed countries.

TABLE IV.8: INFORMATION TECHNOLOGY AND COMPANIES' EXTERNAL CONNECTIONS (% of companies bearing every type of connection)

		TOTAL (%)	INDUSTRIAL SECTOR		SIZE	
			Manu-facturing (%)	Ser-vices (%)	Medium (%)	Large (%)
Web page posting information for customers on the firm's products or services	Since 1990 approx.	84.4	94.4	71.4	75.0	93.8
	Last 3 years only	40.6	55.6	21.4	50.0	31.3
Electronic operations with vendors	Since 1990 approx.	28.1	27.8	28.6	12.5	43.8
	Last 3 years only	15.6	16.7	14.3	12.5	18.8
Product sales online	Since 1990 approx.	18.8	16.7	21.4	6.3	31.3
	Last 3 years only	12.5	16.7	7.1	6.3	18.8

The use of Web pages is widespread among companies belonging to economic sectors subject to our empirical research – machinery, food, trade, finance, and telecom. Companies not having a Web page view this situation as a deficiency they will try to overcome. Anyhow, the most extensive use of Web sites is related to providing information to customers, both current and potential. A few of them support transactions and their technology has improved, to the extent that worldwide standards have been matched. In some companies, Web pages contain information – technical, economic and related to production plans - for vendors, who can access the site with a password especially provided to those ends (ML7). The operations manager of a certain firm (SL25) pointed out that vendors could have online access to order statements; in addition, they are paid through the Intranet system, directly in their bank account (1537).

One of the factors discouraging companies to establish digital connections with vendors or customers is that many of them (vendors or customers) still do not

count on the necessary technical means. For instance, only 37.0% of small-sized companies – those reporting sales volumes between 2.4 and 24 thousand UF - bears an Internet connection (Ministry of Economy, 2002). When those unconnected organizations correspond to vendors, subcontractors or customers of a certain firm, the latter does not find any justification, at least in the short run, to develop those connections.

As observed in the country-level data of the Ministry of Economy's survey, the use of electronic networks for economic **transactions** is much lower (less than 30% of the companies we studied is involved in them). Concerning this matter, as well as Web site availability, our data shows a wider gap between medium-sized and large companies.

A particularly significant use of ICT, that confirms what we already observed regarding the importance of ownership ties and of the networks based on them, occurs within holdings or business groups. Such type of communication is relevant among the companies belonging to these holdings and groups and even has greater significance when it involves the connection among local companies and those located overseas, in which case these electronic ties are critical. A similar situation may be identified among companies belonging to multinationals, the networks of which are the oldest of our sample of firms.

2.4. General status of application of ICT by firms

Results of two recent researches (Santiago Chamber of Commerce, 2002, and Ministry of Economy, 2002), show that the level of "information and communication technology absorption capacity", as well as the connectivity of Chilean companies are **among the highest in Latin America**. The Center for Digital Economy Studies, of the Santiago Chamber of Commerce, positions Chile in the first place of the region, markedly over Argentina, Costa Rica, Colombia,

Brazil, Mexico, and Peru.[71] In the same line, Alvaro Díaz, Secretary of Economy, when presenting the results of study conducted by his MInistry, highlighted that the Chilean 46.6% of electronically connected firms represents the "highest degree of penetration in Latin America".[72]

On the other hand, **at a worldwide level**, Chile is in a position that, in spite of being far from leading countries, is advanced with regard to countries of similar characteristics, and is one of those showing an accelerated rhythm of progress. The following table shows a comparative vision.

[71] The "ICTs absorption capacity" index for Chile is 45.3, while for Argentina it amounts to 38.0, for Brazil 28.2, and for Mexico 23.4 (Santiago Chamber of Commerce, 2002: 23).
[72] El Mercurio, August 28, 2002.

TABLE IV.9: RANKING OF COUNTRIES ACCORDING TO INDEX OF ICT ABSORPTION CAPACITY (partial list of countries, for years 2001 and 2002)

GROUP	POSITION 2002	COUNTRY	2001	2002
I. Leaders	1	USA	144.9	158.5
	3	Finland	105.8	119.7
	4	Sweden	109.3	119.0
	6	Canada	104.7	107.8
II. Advanced followers	7	Japan	87.4	100.6
	8	Australia	93.0	100.2
	10	United Kingdom	85.9	94.9
	15	France	70.3	78.6
III. Emerging followers	17	Italy	64.4	67.9
	19	Spain	51.4	65.2
	20	Portugal	56.2	62.3
IV. Potential followers	21	Czech Rep.	36.0	55.2
	22	Malaysia	32.4	47.0
	24	**Chile**	**35.2**	**45.3**
	25	Argentina	33.2	38.0
	26	Costa Rica	30.7	35.5
	27	Colombia	26.9	28.5
	28	Russia	28.2	28.3
V. Stragglers	29	Brazil	24.7	28.2
	31	China	23.7	26.0
	32	Mexico	21.6	25.5
	35	Peru	19.0	23.4
	38	India	15.2	16.1
VI. Excluded	40	Kenya	10.8	11.8
	43	Nigeria	3.5	3.7

Source: Santiago Chamber of Commerce (2002).

According to this ranking, Chile is near from getting to the “emerging follower” group of countries, in application of these technologies.

If we go back now to the graphic intended to “map” the **degree of internal digitalization of the organization**, that is, to represent the degree of Intranet and Extranet deployment, the situation in Chilean companies could be reflected as shown below. In the version of the following graphic, darker colors in cells reflect a higher degree of application and consolidation. White cells indicate lack of application or still embryonic or too weak developments.

GRAPHIC 2: DEGREES OF APPLICATION OF INFORMATION TECHNOLOGY TO COMMUNICATION AND ORGANIZATIONAL INTERACTION IN CHILEAN COMPANIES

4. Extended firm (inter-connected through the environment)	Business transactions with vendors and customers (on-line sales and purchase orders, etc.)	Communications with relevant external counterparts (vendors, research centers, customers, etc.)	Management and development of inter-organizational relations and with customers	Management and development considering the cyberspace as a business space	**EXTRANET**
3. Internally integrated firm	Data systems and applications at a firm level	Communications at a firm level (vertical and horizontal)	Management of firm knowledge (development and mobilization of cognitive capital)	Innovation in firm processes (e.g., process reengineering)	
2. Virtual group work	Data systems and applications for group use	Group communications, crossing departmental frontiers	Collaboration in work groups	Innovation in group work processes	**INTRANET**
1. Inter-connected individual	Access, creation, entry and use of data	Access, creation, and distribution of information	Training, education, expertise, socialization	Review and innovation in individual work practices	
	A. DATA	**B. INFORMATION**	**C. KNOWLEDGE**	**D. REFLEXIVITY & INNOVATION**	

Progress achieved, both internally and externally, is evident. There is also awareness of possibilities contained in information tools for firm development. However, no significant steps have been taken towards the use of these technologies as a means for knowledge management and for organizational reflexivity. There is not yet enough awareness on its usefulness or knowledge on practical measures to be adopted for their implementation. There is, on the other hand, a particular weakness in ICT application for team building and working. All

of the above allows us to conclude that a significant part of these technologies potential, in relation to learning, innovation and organizational improvement, has been neglected by local companies.

Anyway, when a corporate culture appreciating work networks and teams is not available, when trust is lacking to ground these kinds of relationships, information technology cannot solve the problem by itself. It is obviously necessary to look for solutions anywhere else.

As we already shown, there is progress and development with regard to electronic networks, although only in early stages. However, **actions taken by the State in relation to ICT application** must be specially highlighted. In international terms, indeed, the Chilean governmental electronic network is positioned in an outstanding place. In the Global E-government research, elaborated by the Center for Public Studies of the University of Brown, the Chilean State is ranked in the first positions at a world level, being the only Latin-American State in such places. In a study conducted by the Harvard University, in turn, Chile is in the 24th position at a world level in the e-government index, "which reflects average evaluation of elements, such as, effectiveness of the government in promoting the use of ICTs, availability of on-line services, level of government's websites, and public - private relationship through the network" (Santiago Chamber of Commerce, 2003: 89,90).

The State, on one hand, has been carrying out a major labor creating horizontal networks among firms, establishing bridges both among firms, and between them and research entities, as we saw before. On the other hand, we see here, it is also contributing to create digital networks among organizations, strengthening such relationships and serving as a demonstration model. This, we reiterate, is consistent with the Chilean centralist tradition, with a State that traditionally has had strong influence on society.

2.5. Conclusions on Organizational Adoption of ICTs

ICTs have become a part of Chilean firm operation, being mostly applied to work processes and management. External connectivity has also been developed. All of it positions Chilean firms at an advanced level regarding the rest of Latin America. Within the worldwide context, in turn, Chile appears as a country that has kept an accelerated rhythm of adoption of this technology, positioning it close to advanced capitalist countries.

Notwithstanding the foregoing, development of these technologies has been much weaker with regard to generation of digital interaction spaces, constitution of virtual work teams and, in general, in the use of ICTs for knowledge management and organizational reflexivity. In this matter, Chilean firms show a deficit. This is, in turn, connected to other socio-organizational weaknesses preventing or obstructing such kind of use of ICTs, which will be further discussed in next chapters.

Thus, in relation to ICTs, Chilean companies are incorporating some of their aspects that strengthen connectivity and flexibility, within a post-Fordist perspective. However, other aspects of this technology that may contribute to teamworking, reflexivity and organizational learning are not being significantly adopted. This results in a major lack of balance that, as we will see below, is also appreciated in other areas of corporate reality.

3. Hard (Production) Technology

What is most peculiar in relation to changes in production technology is its **informatization**, which remits us to the respective contents of the previous point. In other aspects, changes do not imply significant qualitative differences compared to the past. We could say that, with regard to production, the post-Fordist nature is found in digitalization taken to the plant, and in programming and computer-based control of machines and processes. This allows higher flexibilization and versatility within productive processes, increased complexity of productive automation methods, and new production processes and work control modalities.

Technological innovation, in its search to match competence companies, is an imperative assumed by local companies. This is reflected in the results provided by a survey conducted by INE[73] and the Technological Innovation Program, in manufacturing companies throughout the country (see Table below).[74]

[73] INE = Instituto Nacional de Estadísticas – National Statistics Institute
[74] The survey was applied during 1995 to a probabilistic sample of 541 manufacturing industry firms, with 10 or more workers. Its sampling error is 5.1% with a 95% confidence level.

TABLE IV.10: FIRMS' INVESTMENTS IN THE PURCHASE OF EQUIPMENT (% of firms in each situation)

		TOTAL (incl. 10-49) (*) %	SIZE (number of employees)			
			Medium	Large		
			50 to 199 %	200 to 499 %	500 to 999 %	1000 and more %
Has purchased equipment in the last three years		63.5	74.8	87.7	92.8	95.7
Age of purchased equipment	**New**	62.4	72.3	87.8	90.3	87.9
	Second hand	13.8	18.9	19.2	20.2	39.4
Control mechanism	**Manual**	18.1	19.9	12.4	17.7	7.8
	Mechanical	23.8	24.9	31.9	33.5	39.0
	Electronic	38.6	54.7	73.4	86.7	87.9
Aspects in which assistance was provided for the purchase of equipment	**Training**	24.9	27.6	38.2	65.0	56.6
	Start-up	39.2	46.8	73.8	85.4	84.0
	Operation	28.1	22.6	40.5	43.3	55.4

Source: Technological Innovation Program, Ministry of Economy (1997: 40).

(*) Note: this total also includes small companies (with 10 to 49 employees)

According to these figures, more than 75% of medium and large companies had purchased equipment in recent years, and most of them were new equipment. In addition, a significant incorporation of microelectronic-based equipment is observed. This is the technology prevailing in medium and large companies; but not in small companies, where it only accounts for 24.7%.

Our data, referred to the situation existing few years later (2001-2002), show a broadly similar picture. 88.9% of investigated companies had invested in

machinery and equipment during the three previous years, and 77.8% had invested in computer-based control machines or equipment. The latter is quite different from the situation existing in the country early 90s, in which incorporation of this informatized equipment was only incipient (Geller and Ramos, 1997). It is also different from the more general situation prevailing in those years in Latin America; according to data contained in a survey conducted in 1992 by the ILO in five Latin-American countries, only 15.3% of companies had invested, during the three previous years, in microelectronic-based machinery and equipment.[75]

During the 80s, potentialities of computer-based machines and equipment for firm transformation were highlighted by researchers, however, their use was highly reduced. Early this decade, on the contrary, this kind of equipment is already disseminated.[76] We could say that this marks a new phase for Chilean companies with regard to production technology.

In this matter, we may also underscore that, according to data compiled by the ENCLA 99, technology is entrepreneurs' **top investment priority**, while human resources are in the last position. Espinoza and Damianovic (2000: 95), interpreting such results, consider that this expresses entrepreneurs' way of understanding firm's modernization: as more and better technology. At first reading, our study does not agree with this appreciation. Firms' changes are much more complex –as it is shown in all we have already discussed on strategy, structure, etc.-, and we could not say that production technology is a central

[75] Data correspond to 321 firms from Argentina, Brazil, Chile, Colombia and Mexico (ILO/ACDI Regional Project, Technological Change and Labor Market).

[76] In the recently published Latin-American Treaty on Sociology of Work, De la Garza, its editor, characterizing general situation in the region, ascertains that "dissemination of micro-electronic equipment or computer-based automatic control is scarce. In fact, in hard technology, informatization is high, but in relation to office work" (De la Garza, 2000: 150). In our opinion, such situation has currently changed. Informatization has reached production, it has a significant coverage there, and is expanding quickly. On the other hand, application of ICTs are certainly having their major organizational impact in the areas of management and communication – which includes all firm's areas, not only the "office work".

aspect of that.[77] On the other hand, it seems evident that, currently, organizational change needs to include technological change – in which the ICT is acquiring more and more relevance, and that there are other aspects being neglected.

Another aspect to be emphasized regarding investment in machinery and equipment is that it also represents a significant way of **knowledge acquisition** (Katz and Vera, 1997). Added to the fact that – as already noted in reference to information technology – every technology contains knowledge, and the mere use of it implies a process of incorporation of new understanding and experience, equipment purchasing usually involves technical assistance by vendors, with visits from the respective specialists, and training processes aimed at a proper operating of machines and equipment. As shown in the above table, this happened in most of large companies and in almost half of medium companies. In the Chilean context, where few systematic, stable, and efficient mechanisms are in operation to transfer technical skills to the firms, and in which technical training is weak, this method turns out to be significantly important.

The next table includes further detail on firms' investments in production technology.

[77] This statement would maybe be valid for a previous period. Novick (2000: 132), for example, says that "until mid 80s, in most of (Latin-American) countries, innovation process had a limited approach: innovating was practically a synonym of changing machines and equipment"; but, according to her, innovation focus had started to change in such decade.

TABLE IV.11: INNOVATION IN PRODUCTION TECHNOLOGY CARRIED OUT BY MANUFACTURING COMPANIES (% of firms in each situation)

		TOTAL MANU-FACTU-RING (%)	SIZE	
			Medium (%)	Large (%)
Investment in conventional machinery and equipment for production	Since 1990 approx.	77.7	55.5	100.0
	Only in the last 3 years	16.7	22.2	11.1
Investment in microelectronic-based machinery and equipment for production	Since 1990 approx.	66.7	44.4	88.8
	Only in the last 3 years	38.9	33.3	44.4
Investment in numerical control machines – tools	Since 1990 approx.	69.3	66.6	71.4
	Only in the last 3 years	23.1	33.3	14.3
Automation of information systems and process control	Since 1990 approx.	53.0	37.5	66.6
	Only in the last 3 years	41.2	37.5	44.4
Use of computer-based design systems (CAD)	Since 1990 approx.	64.7	50.0	77.8
	Only in the last 3 years	11.8	25.0	0
Redesign of the product or introduction of new products or models (product technology)	Since 1990 approx.	88.3	77.8	100.0
	Only in the last 3 years	47.1	55.6	37.5
Automation of production sequences	Since 1990 approx.	47.0	22.2	75.0
	Only in the last 3 years	17.6	11.1	25.0
Automation of quality inspection in work stations	Since 1990 approx.	29.4	0	55.5
	Only in the last 3 years	17.6	0	33.3
Automation of material handling	Since 1990 approx.	52.9	25.0	77.7
	Only in the last 3 years	29.4	25.0	33.3

In machinery & metal firms, numerical control tool machines are already widely used. Similarly, computer-based design systems (CAD) have become

generalized. Indeed, several companies even considered CAD as an “old” tool (ML11, MM17, ML18). On the other hand, according to the figures shown in the table, production process automation has extended into large companies, while its use is much restricted within medium companies, which may be associated to scale factors and costs.

In general, most of innovations in production technology are relatively far from leading-edge technology at an international level. In accordance with interviewed managers, possession of leading-edge technology is not justifiable. It is usually expected to have “new” technology defined as such with regard to the local market, or to the Latin-American context (ML10, MM17, MM5).

Technological heterogeneity seems to be, at the same time, the most usual. Several companies had technologies from different generations, some of them more than 20 year old, and some others new and relatively state-of-the-art, some of them conventional, and some others of microelectronic type. Entrepreneurs’ point of view seems to be eclectic and governed by very pragmatic criteria in this matter.

The above-referred Technological Innovation Program’s survey included questions about technological innovation **goals**, which could be interpreted, within the context of the survey, as basically referred to production technology. Some goals highlighted by large and medium firms’ managers were: (1) extension of the product range; (2) reduction of process times; (3) reduction of waste rates; (4) reduction of idle times; (5) reduction of labor (this goal is particularly extended in larger companies); (6) increase in series of production (Technological Innovation Program, 1997: 27, 28).

The first goal refers to obtaining a higher variety in production, in order to increase the market share or orienting the firm to new markets. Goals (2) to (5)

are mostly aimed at achieving higher productive efficiency, allowing cost reduction. The last goal (6) is focused on developing higher economies of scale, which is also a way of reducing costs. Such goals are quite consistent with corporate strategic orientations, which, as we have seen, are mostly focused on market and on cost reduction.[78]

Among the main **obstacles** encountered for implementing technological innovations, the managers call attention to the lack of qualified and experienced personnel experience (Technological Innovation Program, 1997: 46). This may be seen as an indicator of the maladjustment arising between these changes and others connected to human resources management – an aspect that has been quite neglected.

* * * * *

As shown by different studies, in the 80s, technological change played a major role in changes implemented by firms. It represented the main way of growth in efficiency and productivity. But, priority was given to the incorporation of **conventional** technology (Geller, 1994; Geller and Ramos, 1997). In the 90s, figures reveal a significant incorporation of **computer-based equipment** into productive processes of companies. In turn, as this is encompassed by the application of ICTs to organizational management and communication, this allows a higher interaction between Production (or operating core) and the remaining areas of the firm. This facilitates the increase of internal efficiency and further organizational flexibilization in order to respond to environment demands and to contingencies that may arise.

[78] An additional goal, highlighted by managers, consists of improvement in work conditions and industrial safety. However, it is not absolutely clear whether this is directly connected to innovation in production technology.

Thus, incorporation of microelectronic-based machines and equipment which has currently has occurred in most of medium and large companies would indicate that, through this way, they are acquiring potentialities concerning flexibilization and internal integration, leading them in the direction of a post-Fordist type of organizational configuration.

CHAPTER V.
CHANGES IN WORK ORGANIZATION AND HUMAN RESOURCES MANAGEMENT

This last chapter on organizational changes will address those changes more directly related to individuals working at the firm, which significantly affect their experience in the firm. Thus, changes occurring first at work organization and then at human resources management will be analyzed.

1. Work organization

Changes in work organization greatly result from the most general changes we have been discussing in the two previous chapters. Thus, structure redesigns, intended to better respond to customers, condition job design: they should be more oriented to customers and involve more functions referred to marketing. Changes in JIT's perspective, aimed at cutting inventories, imply cutting staff previously dedicated to inventory-related tasks and adding new roles to the personnel who was formerly not involved in inventory management. Generalized efforts to cut costs lead to shorter payrolls, which at the same time require employees to be able to carry out varied functions in order to compensate the numbering decrease. Outsourcing, as well as operation with adjusted number of employees, results in flexible temporary staff that comes into play according to variable needs. Quality and productivity improvement efforts look forward to exploring organizational modalities that may prove efficient to those ends. Etc.

Just as regarding the rest of changes so far analyzed, a number of practices that have reached international legitimacy, packed and labeled with well-established names and descriptions that are transmitted by different means – journals, seminars, business schools, consultants, etc. -, also play a role in this area.

Several analyses in Chile and other Latin American countries have evidenced the existence of a wide heterogeneity in work organization practices -Taylorists, post-Fordists, even non-industrial ones- both among firms and within one single firm (Novick 2000; De la Garza, 2000.b; Katz and Vera, 1997; Weiss de Belalcázar and Castañeda, 1990). In this regard, we did not expect anything different: finding that is virtually obvious. No changes will manage to fully replace the existing elements. Organizational and management practices, especially those that have been more central and habitualized, involve significant degrees of inertia. As a consequence, it could be forecasted that new practices will blend with the old ones. Then, the questions rather are how widespread new practices are, which are the particular modalities they undertake, which seems to be their relevance and effects, what are they used for, how much integration or stress is there with previous ways to do or perceive things, what is the resulting organizational synthesis or syncretism produced, which future trends are observed.

Modernization in developed countries has neither managed to cover all the angles of society; only now, when "late modernity" is discussed in these countries, one could say that the "first modernity" has managed to permeate all the layers of society. But, in turn, the "second modernity" that is undoubtedly shaping a new trend in such societies cannot be regarded as widespread; instead, it could be said that there are "post-modernity islands". This is a recurrent phenomenon in history. This situation replicates in the organizational field with post-Fordism. Its social significance may be ratified needless of finding that all or almost all firms are post-Fordist. Even in the U.S., right in the middle of the Taylorism era, i.e., in the 1920s, the number of firms effectively applying Taylor's methods, as originally formulated, was still dismal. [79]

[79] Although processes of work rationalization and burocratization, of which Taylorism was an element, were actually expanding, in an intermixing manner (Littler, 1982).

First of all, a first verification is that changes have been effectively occurring in this area. Thus, 53.3% of the firms sampled had experienced changes in a medium or large scale during the last three years (in 30.0% of the firms managers claim “great changes” have occurred) and such changes were more widespread among service (64.3%) and large (66.6%) firms.

Let’s check these changes considering four of their main expressions: (1) The development of team activities focused on organizational improvement in subjects such as quality, efficiency, safety, or others; (2) the implementation of increasing polyvalence of workers in the tasks they perform; (3) the rise of autonomy and, sometimes concomitant, external work control; (4) the incorporation of temporary employees.

1.1. Group activities as a way of organizational improvement

Virtually all global approaches of change are based on the incorporation of teams, many of which include people of different functional areas and hierarchical levels. In some cases – as in Total Quality Management, DO or Lean Production - these groups constitute **structures** that are **parallel** to the organization’s normal structure: a **scaffolding structure** adhering to normal structure in order to proceed with its revision and improvement. In other cases, such teams represent new ways to carry out daily tasks; they are part of the normal structure.

The groups inherent to parallel structures are used to develop reflexivity inside the firm and contribute to organizational learning. In the organizational context, the building block of said processes is **the team**, rather than individuals. Having gone a long way, both regarding research and consulting – since the early statements of Kurt Lewin in the 1950s [80] -, this is just an axiom of organizational

[80] Cf. Cartwright (1983).

change, that has been incorporated by all the main approaches – Strategic Planning, Organizational Development, Total Quality Management, Reengineering, etc.[81]

On the other hand, with regard to daily work design, work teams or groups also feature potentialities increasingly sought for. They constitute a means for reciprocal socialization and learning and create synergy among their members. By undertaking responsibilities as a collective entity, the work team supports the replaceability of its members and allows for higher delegation of authority, dispensing with supervisors or reducing their powers. This also contributes with greater flexibilization to the organization.

In the case of one or other kind of teams – "parallel" or "normal" -, their use as part of organizational improvement efforts require different supplementary measures for their effectiveness. Thus, providing **special training** for team's members is critical for developing in them the competences required for teamwork. Likewise, they require to be provided with the appropriate **information** to address problems or situations entrusted. On the other hand, in order to have individuals projecting their interests on the team, the reward system of the firm have to count on adequate **incentives** related to group performance. These three aspects – training, information and rewards – are essential for the effectiveness and efficiency of such groups.

The specific modalities followed by these groups or teams could be very variable. For parallel structures, such groups are defined as Quality Circles, Quality Improvement Teams, Problem Solving Groups, organizational Learning Groups,

[81] For example, diverse investigations on Japanese reality (Kenney and Florida, 1993; Nonaka and Takeuchi, 1995; Womack, Jones & Roos, 1990) have shown a wide use of teams in the firms of that country and their relevance for organizational improvements and for the achievements obtained in productivity and quality.

Participation Groups, Labor Life Quality Committees, Six Sigma Project Teams, etc.

The importance they have reached and the velocity of their implementation by firms could be observed in the following table, with data referred to the use of different types of teams in the 1,000 biggest firms of the USA.

TABLE V.1: NUMBER OF FIRMS IN THE UNITED STATES USING DIVERSE KINDS OF TEAMS (in %)

	1987 (%)	1990 (%)	1993 (%)	1996 (%)
Quality Circles	61	66	65	60
Employee Participation Groups other than Quality Circles	70	86	91	94
Union-Management Quality-of-Work-Life Committees	30	35	35	36
Self-Managing Work Teams	28	47	68	78

Source: Lawler, Mohrman and Ledford (1998: 42, 44).

Through these figures, one can observe that the presence of these groups in one or another modality, has been expanded to encompass practically all of the most outstanding firms. Quality Circles represented a type of format that, under the influence of Japanese successes, had great popularity during the 80s and the beginning of the 90s; afterwards, having declined. On the other hand, other ways of group participation have experienced impressive growth, taking their place, and extending themselves to 94% of the main North American firms.

In the table, the first three types of groups correspond to parallel structures. The fourth is referred to the “normal” work. In the last case, one can also observe the noticeable increase, in a marked upward trend, of this kind of team.

Let's examine now the situation in Chilean firms. Some indicators are in the following table.

TABLE V.2: CHANGES IN WORK ORGANIZATION (1) (% of firms applying each type of program or change)

APPLICATION OF PROGRAMS OR CHANGES		TOTAL (%)	INDUSTRIAL SECTOR			
			Manu-facturing	Services	(%)	(%)
or similar groups	Since 1990 approx.	22.6	23.5	21.4	0	46.7
	years	0	0	0	0	0
Continuous improvement / Improvement based on the revision of their practices by employees	Since 1990 approx.	20.0	12.6	28.6	12.5	28.5
	Only last 3 years	10.0	6.3	14.3	12.5	7.1
Statistical control of processes and / or zero defect program (MANUFACTURING ONLY)	Since 1990 approx.	-	31.3	-	12.5	50.0
	Only last 3 years		0		0	0
Introduction of Work Teams	Since 1990 approx.	41.3	25.0	61.6	37.5	46.2
	Only last 3 years	17.2	12.5	23.1	25.0	7.7
Use of temporary teams for projects	Since 1990 approx.	53.4	58.8	46.2	43.8	64.2
	Only last 3 years	16.7	23.5	7.7	25.0	7.1

Groups for organizational improvement

The first type of group, corresponding to **parallel structures**, is represented by the three first rows on the table. It shows a reduced application level, both as number of firms making use of them (about 20%) and as number of employees involved in these activities. In most cases, groups with such objectives were formed at upper or managerial levels. Quality Circles in particular, are a practice

that had been applied by several firms, but which they discarded later. The insufficiency of its results, mostly derived from weaknesses in form of application has also dissuaded other firms from using it. This could explain why during last years no firms are implementing them (a deeper analysis of these groups and the problems of their application in the country will be made in the following chapter).

Their presence was more marked and extended in some large firms in the advanced service sector – telecommunications, finance -, specially influenced by multinational firms of which they are part.

Work team, permanent or temporary

Data with respect to work teams for the **normal operation** of the organization (last two rows in the table) show higher rates of implementation. However, these figures cover a very heterogeneous variety of situations. Firms where the incorporation of work teams represents a generalized way of work organization, and where such teams were provided with the above mentioned conditions for their effectiveness -training, information, rewards-, are a minority – less than 20% of the total. In addition, it is reiterated what we said regarding parallel improvement teams: their applications are focused on higher levels of hierarchy and professionals of the technostructure. Also, comparing with the situation at the beginning of the 90s decade, there is no noticeable increase, at least in manufacturing firms (Geller and Ramos, 1997).

Care must be taken in relation to the determination of the existence of work teams. Unless careful observations are made, the respective measurement rests on the appraisal of managers or other members of the firm. One problem in this respect is the interpretation made on the “work team” concept. Frequently, interviewed parties stated that they “worked in teams”, implying that they work in

an integrated, cooperative manner. Sometimes, they referred such concept to a branch, or other organizational unit having a “team spirit”. In our analysis, we attempted to distinguish among these interpretations on the meaning of “team” and discern the presence of groups effectively and definitely organized as teams with their own and specific objectives. In such perspective, when the Labor Survey of the public Work Department (ENCLA 99) reported the existence of “work team” in 71.6% of medium-sized firms and 75.0% of large firms, we think that such too elevated figures are inflated due to this type of semantic differences.

Given the relevance these different types of groups and teams – “normal” and “parallel” - have for changes, in next chapter we will analyze in more detail what happens with them. However, it could be stated that their application in Chilean firms has been limited which has repercussions for changes in general.

1.2. Polyvalence

Searching for greater flexibility of the firm – in products and services variety and volume variability- as well as efforts to reduce the amount of resources employed, are factors driving firms to encourage polyvalence in their members.

Polyvalence allows employees to assume additional functions to those habitually performed, enabling them to absorb, for example, a greater demand of production or other similar contingency, avoiding an increase in the number of employees. On the other hand, it facilitates workers adaptation to a more diversified production or service work.

In the case of the manufacturing, this could also be supported by arranging machines so as to facilitate displacement of an operator among different

machines: “U” cells. The layout is redesigned, so as to improve changes in work organization.

Polyvalence in its more effective forms, involves more enriched work and is associated to a higher qualification and development of new skills. Nevertheless, it could also involve a simple addition of tasks without including greater qualifications: **multitask** polyvalence as opposed to **multiskilling** polyvalence (Rinehart, Huxley & Robertson, 1997; Novick, 2000; Abramo, Montero, Reinecke, 1997).

The next table describes some of the elements on the respective situation in Chilean firms.

TABLE V.3: CHANGES IN WORK ORGANIZATION (2): POLYVALENCE (% of firms applying each program or change)

APPLICATION OF PROGRAMS OR CHANGES		TOTAL (%)	INDUSTRIAL SECTOR		SIZE	
			Manu-facturing (%)	Services (%)	Medium (%)	Large (%)
Assignment of higher number of **similar** tasks per operator or employee	Since 1990 approx.	43.3	37.5	50.0	46.7	40.0
	Only 3 last years	30.0	37.5	21.4	46.7	13.3
Assignment of higher number of **diverse** tasks per operator or employee	Since 1990 approx.	73.3	66.6	83.4	75.1	71.5
	Only 3 last years	43.3	44.4	41.7	56.3	28.6
Assignment of equipment programming tasks to operators (MANUFACTURING ONLY)	Since 1990 approx.	-	35.2	-	33.3	37.5
	Only 3 last years		17.6		22.2	12.5
Assignment of quality statistical control tasks to operators (MANUFACTURING ONLY)	Since 1990 approx.	-	29.4	-	22.2	37.5
	Only 3 last years		17.6		11.1	25.0
Assignment of maintenance tasks to operators (MANUFACTURING ONLY)	Since 1990 approx.	-	62.5	-	50.0	75.0
	Only 3 last years		37.5		25.0	50.0
Assignment of tasks related to inventory management to operators / employees	Since 1990 approx.	30.0	25.1	35.7	33.3	26.7
	Only 3 last years	10.0	6.3	14.3	13.3	6.7
Polyvalence of employees	Since 1990 approx.	74.2	88.3	57.1	62.5	86.7
	Only 3 last years	32.3	41.2	21.4	25.0	40.0
Rotation of employees among work positions	Since 1990 approx.	56.7	62.5	50.0	46.7	66.6
	Only 3 last years	20.0	25.0	14.3	26.7	13.3

As shown by these data, polyvalence represents a change that has extended in Chilean firms. It is present in 74.2% of the organizations studied and it had happened in practically half of them during last years.

Likewise, it could also be observed that a great part of the firms (73.3%) has assigned a higher number of diverse activities to their employees. Polyvalence introduction in the firms analyzed is in fact related to the incorporation of **diverse** tasks to the labor of their members (from the total firms with polyvalence, 76.2% of them involve different tasks.)

Some of the diverse tasks implying new skills, introduced in manufacturing firms are maintenance, equipment programming and quality statistical control; another task, common to service firms, is inventory management.

Even if incorporation of diverse tasks prevails, in 41.2% of the firms applying polyvalence there is incorporation of **similar** tasks.[82] This could represent rather a work overload instead of an increase of labor competences.

Is this polyvalence related to a higher workers' decision making power? The statistical analysis of the employee's data shows that polyvalence is related to a higher autonomy at work, although the increase is not so significant.[83]

In any case, polyvalence makes work flexible, and jobs cease having clearly defined contents. The manager of a firm from the financial sector (SL20) was categorical in stating that old job descriptions, specifying what employees should do, "are obsolete (...), because everybody has to do all kinds of work. Today you do one thing and tomorrow another . Nobody could say '¡ah!, but this is not in my job description. I can't do it" (2192). This is a common observation among the managers interviewed, and which does not seem to have found opposition in workers, as it did in the U.S., where many union have fought in defense of the

[82] Diverse and similar tasks overlapped in 28.6% of the workers.

[83] By making the variance analysis, taking as independent variable the existence or inexistence of higher diversity of the tasks required, and as dependent variable an autonomy index, there are statistically significant differences (p=0.002).

definitions of pre-existing job definitions and the salary structures associated with them, all of which was much more institutionalized than in Chile (see Parker and Slaughter, 1988; and Parker and Slaughter, 1994). With respect to the absence of this resistance, in the Chilean case, occurring in front of this, and other organizational changes, three basic explanatory factors must be noted: union and organizational weakness of workers; a legislation that explicitly excludes from collective negotiations, "those matters restraining or limiting the power of the employer to organize, manage and administer the firm"; [84] and the slow modernization of union action.

A noteworthy question we can ask is about the effects that such flexibility, derived from polyvalence has on the cultural meaning of work for the employees. As work loses centralization in life to be greatly replaced by the primacy of consumption as source of meaning – in a trend strongly confirmed, both in advanced capitalism countries and in Chile (Offe, 1992; Moulian, 1997; PNUD, 2002) - work is also losing its own boundaries, which becomes more indefinite. On one hand, this opens creativity spaces for workers; but, on the other hand, it is a source of uncertainty. In one or another way, the rigidity and certainty of the Fordist world begin to disappear in the experience of the work itself and are replaced for fluidity, change and lack of definition, a trend that undoubtedly could be qualified as post-Fordist.

Besides, in another level of analysis, this redefinition of work in addition to being a component of organizational changes, provides a type of experience contrasting with old social stabilities and definitions, and which exhibits affinities with the sociocultural processes of post-modernization.

However, we could not ensure which is the advance degree of this transformation, but in fact, it is confirmed that it is an ongoing process, more

[84] Labor Legal Code (updated to October 2001), article 306.

visible in some organizations than in others. Maybe, it relates to the development of a still restrained versatility. Our appreciation is that higher flexibility of tasks occurs in service firms, and in some administrative areas of manufacturing firms. On the other hand, it seems that in spite of the changes occurred the identity of occupations is still maintained in manufacturing firms.

Rotation

Polyvalence makes it easier to rotate employees in fact, in 56.7% of the firms analyzed there was rotation among job positions. In various firms (ML11, SL21, SL20), it was used to rotate supervisors and heads between different areas or branches of the organization. An administrator from a supermarket chain (SL25), for example, stated “I have been administrator in six branches (...) because it is always important. It would not be good to be six years in the same branch. You begin to be part of the scene. It is important that an administrator keep knowing. I have had the possibility to be in different [branches] (...), that is, I had been moving and known different realities, different customers, and in consequence, business becomes more entertaining. I think that change is important (...), every two or three years it is important that we be moved” (2247).

In the above citation two important aspects of rotations are clear: it enhances the members’ global vision through the contact with internal organizational diversity and, on the other hand, it contributes to vitalize the work activity, making it more challenging and encouraging.

1.3. Autonomy and control at work

In 31.0% of firms, the managers interviewed stated that the firm had assigned workers with more power of decision-making with respect to their jobs. The extension among firms of this higher autonomy, as it seems, is rather lower than

that reached by the variety of tasks and polyvalence. The increase in autonomy does not seem to be even or having a similar importance in the practice – except for a third of the firms.

TABLE V.4: CHANGES IN WORK ORGANIZATION (3): AUTONOMY AND CONTROL (% of firms applying every measure)

MEASURES		TOTAL (%)	INDUSTRIAL SECTOR		SIZE	
			Manu-facturing (%)	Services (%)	Medium (%)	Large (%)
Assignment of higher power of decision-making to workers in relation to their jobs	Since 1990 approx.	31.0	35.3	25.0	40.0	21.4
	Only 3 last years	13.8	23.5	0	13.3	14.3
Computerized control systems of work	Since 1990 approx.	40.0	31.3	50.0	40.0	40.0
	Only 3 last years	20.0	6.3	35.7	26.7	13.3

Decentralization as a necessary way to achieve higher rapidity in decision-making and greater adequacy to local realities, would have essentially reached up to mid-level management. Difficulties to descend the decision-making seems to be considerably related to cultural and psychosocial factors: traditional and hierarchical corporate cultures; mental models of managers who do not appreciate enough the initiative of employees; lack of workers' experience on making decisions; etc.

Parallel to this limited advance of autonomy, there is through the ICT via an increase of the **external control** on labor activities, which was showed in 40.0% of the firms, and was more extended in service firms (it occurred in 50% of them).

This is one of the world trends, associated to the development of ICTs. In accordance with a survey applied in 2000 to 2,100 firms of the U.S.A., almost

75% of them registered and checked communications and electronic activities of the personnel (American Management Association, 2000).[85] The following chart describes in more details the results of such analysis.

TABLE V.5: ELECTRONIC SURVEILLANCE OF PERSONNEL IN THE US, 1997 – 2000 (% of firms applying every measure)

CONTROL MEASURES	1997	1998	1999	2000
Reading and examining of computer files	13.7	19.6	21.4	30.8
Reading and examining of e-mail messages	14.9	20.2	27.0	38.1
Video recording of work activities	15.7	15.6	16.1	14.6
Number of telephone calls and time devoted to them	34.4	40.2	38.6	44.0
Use of computers (time dedicated and number of digitations)	16.1	15.9	15.2	19.4
Video surveillance for security reasons	33.7	32.7	32.8	35.3

Source: American Management Association (2000)

Electronic surveillance of the activities carried out by workers is spreading and according to the data in the previous table, it is an increasing trend. This is also evidenced among Chilean firms.

Digital recording of activities fosters control. The manager of a service firm (SL20) explained how they managed information. According to him, they kept an "outstanding" level of information on management on a customer-by-customer basis, actually one of the best in Latin America. This excelling level allows them to know "exactly" how management and profitability is like per every customer and how many and which products any particular customer is using. Based on such information, doing individual follow-up per account executive, branch office or any relevant unit is very simple. Accordingly, for example, "you know exactly

[85] As reported in a world report from ILO (2002: 313, 314).

how every account executive is performing", he said (2600). The electronic record being kept supports employee's performance evaluation and control based on information that may be considered noticeably more "objective" than other sources.

In that sense, this use of digital information supports effective monitoring of the activity within the organization and allows to deliver useful feedback to firm members and units. Provided that the data recorded truthfully depicts important labor activities, in addition to be a contribution for the firm, these systems may also become valuable for employees.

In some cases, however, those monitoring systems are perceived by workers as nothing but a vehicle to "catch them at fault". In a determined firm (Imex), in a focus group discussion, employees agreed on that they all felt constantly under close watch. With the new computer system –they claimed- "one is absolutely identified" if, for example, one does a poor billing. On the other hand, commented another employee, "there are cameras everywhere (…), even at the coffee shop!" Some of them were even convinced that "telephones had been wired". "Many times –explained another- your line is tapped. Sometimes you're on the phone and you can feel when your line has been tapped" (2605-2609). In 2000, according to the above-mentioned survey, telephone conversations held by employees were tapped and controlled in 11.5% of the U.S. firms sampled. Accordingly, what the previously cited employees report regarding telephone surveillance may be accurate. In any case, whether accurate or not, the key issue here is the widespread **feeling of being under close electronic watch** and the resulting concern or fear. Another telecom firm (SL31) had implemented leading edge work computer control systems. One manager at this particular firm explained, when referring to the operators in charge of databases, that "they don't even know, but we are fully acquainted with all they do…, the number of calls they made along the day… we control all that" (2613). It may well be that some

of these employees do not notice it – as this manager reckons - but others certainly will. How the management uses the information compiled will determine whether a surveillance climate is generated or not; two likely scenarios are, either a climate where employees feel sensitively or negatively about this issue or one where employees do not worry about computer control. Such type of use, in turn, is related to the cultural framework and management approaches under which such practices take place.

The activities subjected to computer monitoring are diverse. Some firms automatically monitor the presence of their employees, as well as the time they get to work and leave the firm or their workstation. Monitoring the use of computers is also under way in Chile, although with very little sophistication. Contingent issues, for example, related to Internet, have been “solved” by several firms by simply barring Internet access to employees.

A telecom firm (SL21) had a rather sophisticated use to this technology as employees were provided online feedback on their service performance by informing them how long they had been dealing with customers, briefing them on the customers holding on line and their characteristics and sending them urgency signals whenever they exceeded the standard time for customer service that has been set by default. Such signals are also received by the respective supervisor, who personally checks on an employee when delays remain or become recurrent. Consequently, this may be an ambivalent tool for employees. On the one hand, it supports their work but, on the other, it puts them under pressure and “turns them in” if they fail to do as they are told. This is expressed in the comments made by the employees interviewed. One of them said: “One day I covered over 40 customers and said to myself ‘awesome, how did I do it?’ You can check your times. [At a certain moment] you already know that you’ve already taken longer than the 15 minutes you’re allowed; you’re in red (…) then, you got to speed things up. Sometimes you deal with customers who feel like

chatting and one has to be very nice to cut the long story short, although…. Before, when you were over with a customer, [then] either went to the restroom or somewhere else, to your co-worker's station. You can't do that now. You have to sign out. And then, immediately after that you're assigned another customer. Consequently, attention is faster" (1434). Another female employee commented that this system "is an awful tool putting pressure on them" and explained: "in 15 minutes you got to fix the customer's account, check on every problem he has, sell a product to the same customer and replace his old equipment, all in 15 minutes, so you can guess that…". "(…) And if you take longer than those 15 minutes, your supervisor drops by to find our what's going on, why you are in red. It's then like you have a signal beeping on your computer" (1438).

In short, for one thing, employee's entitlement to make decisions has increased dismally and, on the other hand, the level of control through ICT tools is rising considerably, particularly in the service sector. External control systems develop and become more complex in a greater extent as compared to the procedures fostering and enabling employees' self-control.

Measures like job polyvalence and rotation are representative of **work (internal) socio-organizational flexibility**.[86] This is added to external organizational flexibilization, which we have already dealt with and which is expressed in outsourcing and creation of subcontractor networks, strategic alliances and other networks. At the same time, when we referred to technological change we also addressed **technical flexibility** –which allows to adjust volumes and variety of products. In the next section we will see a fourth form of flexibilization developed by firms.

[86] Some authors refer to this form of flexibility as "functional flexibility".

1.4. Temporary jobs

Being able to hire more personnel, on a contingent basis, whenever internal processes and demand so requires, accounts for a major form of flexibilization for firms. This is a type of flexibilization we could refer to as **"contractual"** flexibilization of labor modalities: including hiring temporary or part-time workers. In addition, this contractual flexibilization also encompasses easier ways to replace or lay off employees.

Since the 70s, a number of major legal changes were introduced that simplified corporate actions to dismiss or lay off employees and, at the same time, reduced employee's recourses to oppose such decision. Likewise – as we will discuss in greater depth in the following section on human resources management - hiring part-time or temporary workers became a regular practice.

The following table shows data on this type of flexibilization, concerning service firms. [87]

[87] This question was not included in systematic way for the manufacturing firms, allowing quantification.

TABLE V.6: CHANGES IN WORK ORGANIZATION (4): TEMPORARY JOBS (% of firms applying every measure

		TOTAL SERVICES (%)	SIZE	
			Medium (%)	Large (%)
Addition of temporaryl employees to sales	Since 1990 approx.	50.0	28.6	71.4
	Last 3 years only	7.1	14.3	0
Addition of temporary employees to other positions	Since 1990 approx.	64.2	42.9	85.7
	Last 3 years only	7.1	14.3	0
Addition of temporary employees directly hired by the firm	Since 1990 approx.	42.9	28.6	57.1
	Last 3 years only	0	0	0
Addition of temporary employees provided by an external firm	Since 1990 approx.	57.2	28.6	85.7
	Last 3 years only	14.3	28.6	0
Addition of part-time employees (less hours than regular full-time employees)	Since 1990 approx.	50.0	28.6	71.4
	Last 3 years only	14.3	14.3	14.3
Recruitment of teleworkers	Since 1990 approx.	7.1	14.3	0
	Last 3 years only	7.1	14.3	0

Only 30.8% of service firms were **not** hiring temporary employees. Half of the firms hired temporary employees for sales posts – the most variable work, taking into consideration the various contingencies affecting it. 64.2% hired temps to cover other tasks. Finally, 46.2% of all the firms hired temporary workers for both sales jobs and other tasks.[88]

This addition of temporary employees is a feature that has become customary among firms. As a result, there are a big number of firms devoted to providing such type of personnel to the firms that need it. As a matter of fact, 57.2% of the

[88] See also what discussed under item 4.2 about contingent personnel.

firms resorted to these external vendors to hire the required temporary personnel. In any case, a regular practice observed among firms (in 40% of the firms hiring temporary personnel) is simultaneously requesting the services of external personnel vendors and hiring new workers on their own.

Part-time jobs are another modality showing certain level of growth among firms, although, in general terms, the number of part-time workers is rather low in the corporate world. Comparatively, hiring temporary workers was the main approach chosen and applied by the firms included in this study.[89]

Part-time and temporary jobs constitute flexible employment modalities that markedly diverge from the **most widely used employment model of the Fordist stage**. The main characteristics of the latter, prevailing until a couple of decades ago, are as follows: (1) full-time, year-round jobs; (2) job stability; (3) location at a collective work center; and (4) social contract between the employer and the employee, based on well-defined work specifications, clearly stated standard compensations, foreseeable job career and worker commitment to the firm. This model, as shown by supporting data, would be undergoing a slow but progressive undermining process in developed economies (Carnoy, 2000; Castells, 2000) .[90]

Carnoy and Castells measure the advancement of flexible employment in developed countries by taking into consideration the proportion of temporary,

[89] As shown by ENCLA 99 research, only 1.5% of the firms of all economic sectors and size included part-time employees, most of which worked between 15 and 36 hours per week (Espinosa y Damianovic, 2000: 57). Our findings show that in the service sector, among the largest corporations, the rate of firms relying on this kind of workers increases; however, always the number of part-time employees is rather low. On the other hand, INE and CASEN figures evidence a higher number of part-time employees, more than 10% of the employed population, and such ratio shows an upward trend. So, from the total figure of employees in the Metropolitan Region, part-time jobs among medium-sized firms increased from 3.9% in 1990 to 13.4% in 1998, and among large firms, they rose from 3.9% to 8.7% over the same period. To a certain extent, this growth has resulted in deterioration of work posts (Wormald, Cereceda y Ugalde, 2002: 182).

[90] This "traditional" model we refer to as "Fordist" is called "standard" by Carnoy and Castells.

part-time and self-employed workers with reference to the total of employees. The analysis of employment data between 1983 and 1998 evidences a clear and general growth of these kinds of jobs; so that, for example, in 1997, temporary workers in Germany, France, Spain and Australia reached to approximately 15% and, in 1998, part-time jobs in the Netherlands, the United Kingdom, Japan and Australia exceed 20%. If we add the percentages of the three forms considered of flexible employment – temporary, part-time and self-employed jobs - the 10 countries subject to discussion by these authors show approximately 30% of the respective labor force in these kinds of jobs.[91]

Thus, the flexible, post-Fordist employment is gaining increasingly further ground in most developed societies. Even in some countries like Japan, Australia and the Netherlands, this modality already reaches over 40% of total employment.

In Chile, according to data from the Socioeconomic Characterization Survey by Mideplan (CASEN 2000), temporary jobs as of 2000 accounted for **15.2%** of total employment (Ministry of Labor and Social Security, 2002: 10) . In turn, the employment survey carried out by INE (National Bureau of Statistics) showed that over the last months in 2001, **14.5%** of workers had **part-time jobs**[92] (INE, 2002: 122). Finally, ILO data (2002: 111) showed that in 2000, **19.7%** of non-agricultural jobs were **self-employed** workers (excluding administrative, professional and technical employees), who ILO classifies as part of the informal sector.

[91] In the U.S. this figure is a little lower, reaching approximately 23%. Castells (2000: 326-331) explains this difference based on the flexibilization the institutions in that country would rely on, which would ensure enough mobility to workers. On the other hand, some regional studies, for example in California, would show a rise among flexible employment forms that, one could think, may eventually become generalized all over the country.

[92] Considering "part-time" labor when the work is for less than 35 hours per week.

These three figures may not simply be added as, to a certain extent, they overlap.[93] In particular, a significant number of temporary workers –around 30.8%, according to CASEN 2000 data- work on a part-time basis. If we deduct that percentage, we would then have that 10.5% of total employees have a temporary, non-part-time job. If we add that figure – as Carnoy and Castells do - to part-time and self-employed workers, we would have that **44.7% of Chilean workers would be subject to flexible employment conditions**.

This figure is undoubtedly high, even higher than that of several developed countries. Certain peculiarities are involved, though. In particular, a significant portion of this flexible employment, as opposed to what occurs in those other countries, is subject to **no institutional or social protection**, as a result of a lack of employment contracts and social security payments, [94] in addition to low levels of compensation.

1.5. Conclusions related to changes in work organization

Significant development may be observed in terms of some forms of flexibility in work organization, such as polyvalence and temporary employment. This involves a different type of bond between the worker and the firm and brings about changes in the definition of work itself. The contractual tie becomes more contingent and the labor of employees within the firm, as a consequence of factors like polyvalence and rotation, grows less specific, more dynamic and more indefinite.

The situation observed among the firms studied, as well another national data, would show that work, as to its organization and the contractual tie involved, is

[93] A problem that is also present in Carnoy and Castells data and analysis.
[94] Accordingly, for example, 60% of temporary workers have not signed a formal employment contract and 66.7% was not affiliated to any social security system (Ministry of Labor and Social Security, 2002).

significantly driven by post-Fordist trends. At the very least, we may ascertain that among Chilean firms, work portrays increasingly less Fordist characteristics.

Alternatively, however, as evidenced in several studies (González, 1999; Espinoza and Damianovic, 2000), legal regulations have been unable to adequately protect workers against the negative aspects of these changes. As a consequence, this flexibility may result in detrimental effects to labor, generating precarious jobs. On that respect, it is illustrative that in the 1990s the number of employees affiliated to the social security system has plunged significantly. In 1990, 86.3% of the employees belonging to the formal sector was affiliated to social security; in 2000, the figure had diminished to 81.2% (ILO, 2002 b: 119). It is worth noting that this drop, this deterioration of formal employment, occurred over a period in which the country experienced a high level of growth: Chilean GDP grew by 6.7% between 1991 and 2001 (ILO, 2002 b: 23). Likewise, this is related to an increase in socioeconomic inequality in the country. If we take the Gini coefficient as income inequality indicator, we find that in 1990 the valued of this coefficient was 53, whereas in 2000 it has risen to 57.[95] In 1990 the Chilean figure was equal to Latin America's average; in 2000, in turn, that figure is several points higher: 57 vs. 54 (ILO, 2002 b: 50). In other words, over the last decade, in Chile, inequality has risen significantly more than in the rest of the region. Changes in firms does not necessarily offer an explanation for this variation; yet, hypothetically, one can argue that their actions, as a not intended effect, are contributing to this inequality or, at least, they are not reducing it.

At the same time, the development of structures and procedures aimed at allowing and fostering corporate learning and reflexivity is relatively low. The respective practices show little pervasiveness among firms and dismal coverage regarding employees, as they bear insufficient support from corporations.

[95] Theoretically, the Gini coefficient ranges from 0 to 100: the higher the value, the larger the inequality.

Consequently, in most cases, those activities are only concentrated at the upper levels of the firm.

Consistently with this, progress in decentralization efforts and delivery of larger independence to workers are scarce as well. Hence, corporate “intelligence” is restricted to managers and professionals and does not spread throughout the firm; as a result of which the experience of the rest of the employees fails to be tapped.

Concerning work organization, then, the typical post-Fordist flexibility trait has developed extensively and soundly. On the contrary, reflexivity and autonomy have only been shaped significantly in a handful of firms, while their development in the rest of the firms has been meager. This involves the problem that such characteristics – reflexivity and autonomy - are precisely those that, when boosted, as opposed to what has been happening, are especially virtuous for the workers development and their sound integration within the firm.

2. Management of human resources

In one way or the other, management of human resources seeks the adequate incorporation of the human element in corporate frameworks so that the firm's objectives may be achieved. Typically, this endeavor encompasses addressing selection, recruiting, induction, training, evaluation, participation, career development, internal mobility, reward distribution and personnel furlough. How these processes are implemented has changed dramatically along time. The earliest approaches – by the beginnings of 20th Century - did not differ greatly when dealing with material and human resources and the latter were conceived in terms of physical capacity and economic motivation. Later approaches gradually assume human complexity and pay increasingly larger attention to a wider range of motivational factors and to the cognitive dimension of individuals. Lately, the sociocultural reality of organizations is addressed, which implies – for personnel management purposes - tackling such aspects like communications, the social networks that are knit within the firm, leadership processes, social groupings, connection with the corporate cultural and socio-organizational conflicts.

If in the relatively more stable and simpler environments of the first half of the 20th Century rational-materialistic approaches sufficed, the growing complexity and dynamism of society, culture, technology developments and competence have required human resources management to grow more sophisticated accordingly. As a consequence, over the last couple of decades and, at least in advanced capitalism countries, routine and administrative aspects have been increasingly relegated to a subordinated level of significance and efforts have been focused on managing collective, group and individual psychosocial and sociocultural processes. To that end, several approaches and soft technologies have been developed.

In such a way, the notion of human resources has gone from seizing it in mechanical and physiological terms to seeing it later from the vantage point of motivations, involvement and social relations; to currently understanding it in terms of sociocognitive and communicative characteristics and abilities. Under current approaches, people's reality within the organization has been conceived, for example, in terms of "networks of conversations for action", that need to be designed and articulated; or in terms of implicit and explicit "knowledge", the development, transference and dissemination of which is to be promoted and managed; or in terms of "competences". These changes in the way the "subject matter" of human resources management is understood has gone hand in hand with the development of new procedures and new psychosocial technologies that are now aimed at, for instance, building "conversational spaces", designing procedures to "externalize and capture tacit knowledge"; and developing cognitive skills.

These new approaches have the assumption that in the "human base" of the organization there are elements necessary for developing potential competitive advantages of the firm; namely, in employees' knowledge, competences, motivation; in their contribution to improving work practices; in their initiatives and creativeness. Workers' contribution is increasingly related to their intellectual skills, rather than to their physical abilities or the development of routine activities, many of which can be better carried out, with steady buildup, by machinery and equipment.

These reconceptualizing and refocusing are conditioned by the more general changes occurring at firms, which they entangle with. Nowadays, there have been developed more "reflexive" organizations, capable of learning, adapting to environmental demands and pressures, whose decisions are decentralized, and whose work teams become more independency. All this requires employees to

acquire certain sociocognitive skills and count on determined knowledge and orientations towards the firm's goals. Accordingly, the role of human resources management is redesigning the policies and procedures to contribute to such endeavor.

One change stemming from this redefinition of HRM is the detachment of the routine administrative dimension that may be either radically outsourced or informatized. This alleviates the human resources management, allowing more dedication to the critical matters, which are highly demanding and complex.

The aforementioned characteristics may be justifiably thought to typify a post-Fordist human resources management: focused on knowledge and competences allowing human resources to be on line with the strategic orientations and corporate development, fostering decentralization, adaptation to the environment, reflexivity and organizational learning.

In Chile, changes in human resources management are strongly conditioned by labor laws and regulations, as well as by the labor market situation. Since mid 1970s and late 1980s, while the country was subjected to a military dictatorship, a major institutional deregulation occurred, facilitating layoffs, restricting collective bargaining; which added to political repression that strongly restricted union organization and actions (Campero y Valenzuela, 1984). This situation strongly influences on the human resources management over that period. In the 90s, protection to workers is enhanced and union rights are strengthened, although the protectionist institutional framework that had prevailed in the country until the early 70s was not restored.[96]

[96] Specification on the legal standards applicable to labor and their changes from a comparative Latin American point of view is found in Vega (2001).

During the 1980s, such deregulation, added to a strong unemployment situation and to the repressive dictatorship, led corporate human resources management to prioritize economic rationalization and authoritarian management, maintaining traditional concepts of personnel management.[97]

Over the 1990s, several research projects (Montero, 1997; Geller & Ramos, 1997; Abramo, Montero & Reinecke, 1997; Alvarez & Tovar, 2000; Wormald, 1995) coincide in showing the little development human resources management still undergoes: it is not perceived under the strategic management perspective; there is little systematization of procedures, regarding training, evaluation, mobility, career development, etc.; little attention is given to compiling and keeping systematized information on personnel related matters; professionalization of human resources is still incipient; an extremely secondary position is assigned to human resources management in production strategies; weaknesses may be observed in the kind of training workers are given; actions in the human resources area are scattered and unrelated to the global corporate strategy; only slight development has been achieved concerning workers collaboration and participation practices; etc.

Overall, the findings of this study do not show any inflection in this matter. No major transformations have occurred and Human Resources, as a management field – in spite of how valued in the managerial discourse - remains an **underdeveloped area**. In fact, in 66.7% of the firms investigated, no changes to human resources management had been introduced or, if any, they had been merely specific. Stagnation was more widespread among manufacturing firms,

[97] There is virtually no research on the inner corporate reality over such period, to which, under the military dictatorship, access was simply banned. It should be pointed out that to date and as influenced by this previous trend, strong reluctance to grant access to social researchers still persists. Information rather indirect referring to the situation over such period may be found in Agacino and Rivas (1995), as well as in Abramo, Montero and Reinecke (1997).

where this figure amounted to as much as 70.6%.[98] From all the areas subject to research, this one is undoubtedly the one showing least dynamism.

In several firms, managers admitted that it was a "rather abandoned" area (MM17), "lacking structure" (SM26) and, that in some cases had been reduced, particularly for the purposes of cutting costs (ML16, MM5). Even though in some firms systematizing and structuring human resources management was thought as a "pending task", these actions were **not** an item in their short-term agenda.

Although the aforementioned was the most extensive situation, approximately one third of the firms were developing significant actions in this area, showing systematic concern for personnel training and for the incorporation of workers contribution (SL19, SL20, SL21, SL25, SL27, SL30, MM8).

We could not make a comprehensive review on the several human resources management components, given their complexity and extension. Consequently, our attention will be devoted to the following aspects: (1) personnel training and development; (2) quantitative variability of permanent workers and their job, expressed in layoffs, overtime and shifts; and (3) compensation system. On the other hand, the following chapter addresses the participation issue and will resurface some of these aspects, from the vantage point of workers.

2.1. Personnel training and development

Educating and training the members of the firm is a critical aspect of organizational change development. Managers at the firms sampled are well

[98] In addition, difference based on size should be highlighted. The largest stagnation was observed among medium-sized firms, as opposed to larger ones (75.0% vs. 57.1%), which may be related to lower availability of economic resources. Only when better off entrepreneurs are willing to invest in an area they perceive as uncertain and do not value enough to take risks related to it.

aware of this matter and this may be observed among most of such firms (77.5%), as they have been carrying out training programs over the last period, yet, the deeper and more continuous efforts occur at larger firms (see following table).

TABLE V.7: HUMAN RESOURCES MANAGEMENT (1): TRAINING (% of firms implementing each measure)

MEASURE		TOTAL	INDUSTRIAL SECTOR		SIZE	
			Manu-facturing (%)	Ser-vices (%)	Medium (%)	Large (%)
Better training for managers and supervisors	Since 1990 approx.	77.5	82.3	71.4	73.3	81.3
	Last 3 years only	19.4	23.5	14.3	40.0	0
Better training for office workers	Since 1990 approx.	77.4	82.3	71.4	66.7	87.6
	Last 3 years only	22.6	29.4	14.3	40.0	6.3
Better training for production workers (ONLY MANUFACTURING)	approx.	-	88.9	-	-	-
	Last 3 years only		22.2			
Better training for sales staff (ONLY SERVICES)	Since 1990 approx.	-	-	78.6	-	-
	Last 3 years only			28.6		
Use of the SENCE franchise for training (ONLY SERVICES)	Since 1990 approx.	-	-	92.3	85.7	100.0
	Last 3 years only			7.7	14.3	0
Exchange of management experiences with other firms	approx.	32.0	28.6	36.4	30.8	33.3
	Last 3 years only	8.0	0	18.2	7.7	8.3

All of the firms under study, which offering training for their employees used the SENCE (National Training and Employment Service) taxation franchise, which allows the firms to deduct their employees' training expenses, up to 1% of their

yearly total taxable payroll payments, from their tax payments. [99] This franchise represents a significant governmental support for workers' training, which is mainly used by medium and large firms: around 90% of the workers trained under the SENCE franchise come from such firms. Despite this coverage problem and other shortcomings, the use of the franchise, which very closely resembles the training coverage in the country, had undergone a strong and continuous increase over the last decade. This trend may be observed in the table below.

TABLE V.8: TRAINING UNDER THE SENCE TAXATION FRANCHISE, 1990-2001 (employed labor force, trained workers, training rate and number of firms that provide training to their workers)

	1991		1993		1995		1997	1998	1999	2000	2001
Emplo-yed labor force (thou-sands)	3.134	3.295	3.472	3.831	3.861	3.920	3.997	4.014	4.152	4.181	4.361
Workers trained under taxation fran-chise sands)	232,7	283,7	326,3	385,0	434,4	451,9	482,9	476,4	504,4	620,2	756,1
Rate of trained workers vs. emplo-yed labor force	7,4	8,6	9,4	10,4	10,8	11,5	12,1	11,9	12,2	14,8	17,3
Number of firms	6.827	7.997	8.074	8.569	9.367	12.618	14.825	14.169	17.686	36.683	81.790

Source: SENCE (1997, 1998, 1999, 2001), INE (2002)

Between 1990 and 2001, a remarkable 278.8% growth is experienced in the amount of trained workers, from 6.5% of the total employed labor force, in 1990, to 17.3% by the year 2001. This shows, at an aggregated level, the higher

[99] The expenses for training need assessment, trainee transportation and management of the firm's department in charge of the training may also be included as training expenses. For an analysis of the system and its operation, see Herrera and Ruiz-Tagle (1997).

concern firms have regarding this issue, in part, as a result of this governmental policy subsiding firms' training.

However, along with the increased coverage, which anyway is lower by several percent points than those in advanced industrialization countries, the **quality and systematicity** of the training provided has improved much more slowly and the presence of major weaknesses is observed. A research study by Herrera and Ruiz-Tagle (1997) on the training received by machinery & metal firms – either large, medium or small – highlighted several of such weaknesses: training mostly responding to contingent needs or defined in a relatively improvised manner, without implementing a systematic need detection system; great lack of consideration of workers' opinion – either directly or through the labor unions – over the training program designs; reduced development of the organizational management of training; widespread lack of initial "organizational socialization" practices; etc.

Even without being able to further analyze this issue, our research matches the above results, at least, as far as manufacturing firms are concerned; in connection with the service firms, specially, the large ones, we observed a higher articulation of the training initiatives.

In several of the firms under study, such characteristics of a contingent and asystematic training were observed. Furthermore, in some of them, training had been restricted, especially for production workers at the manufacturing firms, due to higher economic problems and constraints over the last few years. A production manager of a large manufacturing firm (ML18) admitted that training for workers was "quite scanty". At another manufacturing firm (ML10) workers complained about the little training they were being given; they illustrated the above with the case of new workers: "after three or four days, a new worker was already operating the machinery, after zero training (…), taking the risk of an

accident" (5037). At a third manufacturing firm (MM1), the Technical Manager admitted that no training had been given to production staff for the last two years (5001).

Another quite widespread characteristic is the stronger emphasis on training the **administrative staff** with a significant focus on computing issues. The above represents a response to this technology's widespread use and the urgent need to develop the corresponding competences. However, it may be also seen as a way to take advantage of the franchise using it for something easy to define, for which there is a massive offer of courses, and requiring no further analysis within the firm.

Furthermore, most of the training investment is focused on upper and medium level management, and on the professionals of the firm. In this regard, our data show a significant amount of higher training given to supervisors than to lower-ranking workers. This reflects the prevalence of hierarchical notions applied over training and its relevance for the firm's members.[100]

A widespread positive impact on training took place in the firms that had achieved ISO 9000 certification or in those that were involved in the corresponding process. Such certification activities boosted training efforts, which, in the case of manufacturing firms, reached production workers (ML4, MM5, MM6, MM15). A Continuous Improvement program developed by another firm (ML11) had a similar effect.

In contrast with the prevailing shortcomings in the training area, we did find a systematic approach for this process, assuming an organizational perspective, in, approximately, 25% of the firms under study. Almost all these firms, however,

[100] The same situation is observed, at an aggregate level, with the SENCE's data.

were large, service-providing firms (SL19, SL20, SL21, SL25, SM28, SL30, SL31, MM8). Their common feature was that: (1) there was “a lot of training”, as stated by managers and admitted by the employees; (2) it reached all the personnel, from different areas and hierarchical levels; (3) it was part of properly articulated programs, with competence level definitions and varied specializations; (4) worker obtained recognition for their education progress, which resulted in internal mobility within the firm and in career development; (5) education was relatively diverse and included both “technical” and psychosocial aspects; (6) there was some organizational instance in charge of preparing and organizing the respective programs and activities. In such a way, training matched the firm’s strategic direction, intended to facilitate its achievement and, consequently, encouraged the employees to develop the required competences to adapt to the changes the firm pursued: higher efficiency, better customer service, higher process speed, better agility in the decision-making process, more working flexibility and polyvalence, etc.

There are two especially interesting cases, due to their originality and achievements –in the domestic context. The former is the case of a medium-size manufacturing firm (MM8). Here, managers had shaped an “educational project” for their employees and a systematic education process within the firm, which they called the firm’s “university” and which development was supported by a higher education institution. The employees are offered a program, consisting of three semesters, which lead to a “masters” level. The education includes technical training, with a multi-functional approach, including molding, maintenance, painting, hydraulics, quality, etc.; personal development workshops; general education courses (family guidance, history, etc.) The managers’ idea is that, along with the training of their workers to meet the firm’s requirements, they will be provided with a better quality of living and a higher employability. In the words of a manager, the idea is to prepare an “integral worker” (5015-5024). The program, in the early stages, had triggered a huge

interest and involvement by the workers, beyond the management expectations. The achievements, in terms of motivation and commitment resulting from it, may, in turn, be expected to offset the potential temptations a better trained worker may face to moving to another, better-paying job – which is the permanent fear entrepreneurs feel when allocating resources for training.

This is an experience unusual among the Chilean manufacturing firms, both due to its systematic structure and to the "humanist" and general education component it includes. Despite how fruitful it may become, and has proven to be so far, when this firm's managers tried, in its beginnings, to organize it along with other firms, they did not find interest for it and had to undertake the project by themselves (5020). The above, by the way, confirms again how difficult it is to undertake initiatives in inter-firm networks, if they are not supported by ownership ties.

The second especially remarkable case is a telecommunications firm (SL21), which is owned by a multinational corporation. This firm has a fully operational, comprehensive and well articulated education program, which is continuously adding new elements: new contents, procedures and methods. It allows offering a continuous, ongoing education, with contents defined according the needs being detected and to the firm's general directions. Training is closely related to the tasks and challenges the firm's various units and levels face, in such a way that some activities may be seen as training and, at the same time, as part of every day work. Along with the "technical" training regarding the firm's products or other issues, the employees receive an intense training on psychosocial issues – teamwork skills, leadership, conflict management, etc. – which, as employees admit themselves, helps them not only at work, but also in their personal life.[101]

[101] A comment from an employee at this firm, regarding one of these training practices, expresses, typically, the experience undergone: "That day [the day of training] looked like a picnic day, but in fact, one becomes so sensitive in that moment …. get to know people [in a different

For education, this firm also provides a suitable time allocation – sometimes, complete days – and enough amenities for the experience to be pleasant. The above clearly reflects the relevance the firm assigns to training and this is the implied message the employees receive. The methodologies used are also especially suitable; in psychosocial matters, for example, they include plenty of ludic practices, which encourage and facilitate learning. The education has levels and, along with several types of tasks or work positions the workers may go through, provides possibilities for internal mobility and career development for the firm's employees (5142-5179).

In this firm, all of the above results in training becoming a very significant element for the performance of work teams and for the activities of different organizational units. It is preparing, in a very dynamic way, the workers' competences required to meet customers needs and to adjust to the very competitive environment this firm faces. Jointly, this is a significant factor contributing to personnel motivation, good working climate and employees' commitment to the firm.[102]

The notion of "work competences" and "competence management" has been circulating internationally during the last few years among the management levels. **Competence management** involves the design of training, as well as other human resources management activities, considering the competences actually required by current and future organizational tasks and taking the competences actually mastered by the firm's employees into account. In this framework, the **notion of competences** alludes to the capability of people to orchestrate and mobilize cognitive resources or diverse knowledge – technical

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way]. And, in the end, when the wrap-up is made, one says: 'really, it was great to do this together, getting to know each other, because we had been sitting together for around five years and we had never known each other'. One gets a different experience with this and realizes how important teamwork is" (5167).

[102] Independent surveys performed in this firm show those positive results, thus placing it into the top places of the "Great Place to Work" survey in Chile.

and psychosocial knowledge, information and social network management, etc – in determined situations and contexts, in such a way that allows the achievement of the results pursued by the organization (Carrillo and Iranzo, 2000; Mertens, 1996; Vargas, 2002; Monteiro Leite, 1996; Le Boterf, 1997). Therefore, this is a holistic concept, integrating the various knowledge dimensions and is contingent, depending on the application contexts.

In such a way, the "competence" concept is relieved from the narrow-minded and restrictive frameworks of conventional definitions for "skill" that, in its most traditional sense and in the usual social use of such a label, is typically reduced to the technical dimension of work.[103] Within the current scenarios of increasing internal and external complexity and higher relevance of cognitive and psychosocial dimensions, this "competence" concept rises as a new core unit to think of and organize the management of human resources. Thus, it reflects the transformations of post-Fordism in this area of the firm. This perspective forces to precise, based on the organization's strategy and reality it faces, the specific sets of such competences – including behavioral, attitudinal, physical, emotional, ethical and affective elements. Such is the foundation for defining and designing the different human resources processes: selection, training, assessment, reward, career development, etc.

These notions, however, still do not consider a practical relevance in Chilean firms; at least, that was the situation in the group of them under study. Developing training, as well as human resources management in these firms is still in a preliminary stage in most of them. They are undergoing basic organizational problems in this management and the value of the "soft" dimensions of the organization is not adequately assumed yet.

[103] Notwithstanding, the very notion of "skill" has been renewing and incorporating a broader range of contents and, theoretically, nothing would prevent the competences from being subsumed into it. But, as a historical and social product, they have a crystallization, a social solidification, which makes them resistant to such a semantic evolution.

2.2. Staff downsizing and other personnel adjustments

Since the 1980s, staff downsizing has become frequent and widespread in most advanced capitalist countries. Even Japan, despite its higher employment stability in core firms, has followed this trend (Berggren and Nomura, 1997; Westney, 2001). Various sources account for the magnitude of this trend. For instance, 41% of the 8,000 U.S. firms included in the annual survey conducted by the American Management Association (AMA) reported that in the 1992-1993 period had performed labor force downsizing, representing 10.4% of their total workers (Cappelli, 1997: 177). A survey conducted on the 1,000 largest American firms, which we have quoted several times before, shows that in 1996, 51.0% of the firms under study had downsized their labor force over the last 10 years (vs. 47% in 1993) (Lawler, Mohrman and Ledford, 1998: 161, 162). Besides the extent and magnitude of these layoffs, the other remarkable aspect of such initiatives is that – as AMA reported - they are increasingly "**of a strategic or structural nature**" and that the percentage of administrative, middle management, and upper management included in the layoffs is also increasing (Cappelli, 1997).

That is, staff downsizing become a usual, widespread practice among firms and applicable to all kinds of personnel. This is clear, for example, in the case of the "1,000 Fortune" firms, which are precisely the most successful and better-off US firms. Layoffs become one of the mechanisms firms use to achieve flexibility. It is part of what some authors have called "**numeric flexibility**", which also includes the employment of temporary workers. These forms of flexibility, which enable adapting to the environmental contingencies and corporate strategy turnarounds, are distinctive features of a post-Fordist firm. Numeric flexibility is one of the practices, not the most complex anyhow, that allows the firm to overcome its old rigidity and change its size in accordance with its needs. As we noted previously,

other more complex methods to achieve flexibility and size variations operate through network configuration – production chains, strategic alliances, joint ventures, etc. All these mechanisms provide a firm with a "**variable geometry**", which Castells (2000) defines as an attribute of the "network firm", but we can assign it, more widely, to the post-Fordist firm.

In Chile, staff downsizing practices have become significantly habitualized and involve important numbers of personnel. Among the firms under study, 78.1% of them had been performing downsizing over the last few years, and in several of them, the layoff percentages, over the last three years ranged between 20% and 34% of the employees (ML4, ML11, MM17, ML16, SL31). The kind of laid off personnel may be seen in the table below.

TABLE V.9: STAFF DOWNSIZING OVER THE LAST THREE YEARS (% of firms implementing each measure)

MEASURE	(%)	INDUSTRIAL SECTOR		SIZE	
		Manu-facturing (%)	vices (%)	Medium	Large (%)
Downsizing of workers directly involved in production (ONLY MANUFACTURING)	-	38.9	-	-	-
Downsizing of staff indirectly involved in production (ONLY MANUFACTURING)	-	41.2	-	-	-
Downsizing of sale personnel (ONLY SERVICES)	-	-	28.6	-	-
Downsizing of administrative personnel	46.7	43.8	50.0	53.3	40.0

The data shows that downsizing has affected in similar proportions both the personnel directly or indirectly involved in production and the administrative staff. Sale staff downsizing are less widespread, probably because a large proportion

of this kind of staff is temporary, and in those circumstances, firms may reduce the labor force when required, without laying off workers.

Since 1998, the country undergoes the effects of the Asian crisis with a derived economic contraction, whose effects have been manifested in the firms under study. The generalization and magnitude of the layoffs are associated with the crisis. Several firms had faced a demand contraction, and competition conditions had become more difficult for all of them. 40.6% of the surveyed firms, as reported by their managers, were forced to downsize their staff due to the economic crisis.

Considering a countrywide sample, ENCLA 99 also observed the significance of staff downsizing for firms when faced with these difficult economic conditions. According to this survey, the main measures firms undertook to face the crisis were: (1) to postpone investment (mentioned by 45% of employers); (2) to lay off workers (mentioned by 31.1%); (3) to reschedule debts (29.2%); (4) to enter into new debts (28.6%). Layoffs become even more relevant in the case of medium and large firms: 34% out of the medium firms and 39% out of the large ones performed layoffs (Espinoza and Damianovic, 2000: 19, 20).

Most managers in our study, however, stated that they made significant efforts **to avoid layoffs**. The statement of the production manager of a manufacturing firm (ML18) illustrates it: “Last year we had to lay some people off. But, before we laid workers off, we held on as much as we could. People noticed a serious problem, because the workload was quite low and they remained in their jobs. We were keeping an eye on the market behavior and expected to increase sales abroad. Nothing happened and we, finally, had to downsize the staff. Even before that, [we laid off] five people first; then, we relocated others [into a second plant of the firm] and we held on for another month. Instead of firing 30 people in one month, we discharged 20 people over a 4-month period” (3442).

In other words, staff downsizing, despite being a privileged mechanism to face difficult corporate situations, is considered by management with apparent reluctance. It has not become a “natural” cultural element. It might be considered as if they keep the Fordist valuation of staff stability, even though, the usual practice goes towards an increase in employment instability. If this contradiction implies some managers’ cognitive dissonance, probably, in the long term, it will be avoided changing that valuation.

Either reluctantly or not, staff downsizing has widespread resulted in **more adjusted staff levels** in the firms. After the downsizing, new hiring does not follow the pace of production or labor requirement growth. The trend to perform the core business operations with increasingly less people has become a widespread trend among firms. This trend may be analyzed with a deeper quantitative accuracy, in aggregated terms, in connection with one of the industries we are analyzing: the financial sector. The table below lists the changes occurred, as far as staff is concerned, over the last decade.

TABLE V.10: PERSONNEL AND WORKLOAD IN THE CHILEAN FINANCIAL SYSTEM, 1993-2002

	1993	1994	1995	1996	1997	1998		2000		2002
Number of employees	41.545	46.317	44.959	46.527	47.195	42.464	40.946	40.525	38.587	36.701
Total deposits (millions of US Dollars)	25.134	30.672	37.965	42.405	44.062	47.836	45.528	46.581	42.176	40.733
Number of checking accounts (thousands)	869	911	997	1.100	1.182	1.287	1292	1461	1496	1558.3
Number of credit cards (thou-sands)	-	1.908	2.509	2.914	3.140	3.198	3.218	3.780	4.306	4.796
Income (millions of US Dollars)	705	797	854	850	782	698	545	726	900	728
Number of banks	34	33	31	30	29	29	29	28	27	25
Number of branches	1.107	1.191	1.237	1.280	1.325	1.333	1.366	1.408	1.630	1.434
Average employees per bank	1.222	1.40	1.450	1.551	1.627	1.464	1.412	1.447	1.429	1.468
Average employees per branch	37,5	38,9	36,3	36,3	35,6	31,9	30,0	28,8	23,7	25,6
Average checking accounts per employee	20,9	19,7	22,2	23,7	25,1	30,3	31,6	36,1	38,8	42,5

Source: Chilean Banking Association (Estrategia, July 15, 2003); own elaboration.

According these data, between 1993 and 2002, both the number of employees and financial institutions dropped. The big mergers occurred are a significant explanatory factor for such reduction. A second remarkable factor is the increasing automation of the banks' operations. A third factor is constituted by the outsourcing process occurred and the increased use of temporary staff.

Along with staff downsizing (by 11.7% over the decade), however, it may be observed an increase – by 29.5 - in the number of branches, and in various indicators reflecting the volume of operations carried out by the banks: total deposits rise by 62.1%, the number of checking accounts increased by 79.3%, and the number of credit cards jumped 151.3%. Concerning workers, the result of these changes is that they went from an average of 37.5 people per branch in 1993 down to 25.6 people per branch nine years later: a 31.7% reduction in the number of employees operating a bank branch. On the other hand, as a workload parameter, while an average of 20.9 checking accounts were handled per employee in 1993, 42.5 accounts were handled per employee by 2002, i.e., an increase by 103.3%. Something similar, with an even higher increase, is observed regarding credit cards.

In summary, after one decade of changes, the organizational operating units (branches) are now handled with a remarkably smaller number of employees – one third of the previous amount – and these employees handle a considerably higher volume – more than double - of operations.

These figures clearly show the process of lightening and adjusting staff for ever-increasing workloads. Notwithstanding, as previously mentioned, this trend is facilitated by other organizational changes, particularly, the applications of information technology allowing for the automation of processes and elimination of routine activities, and the use of significant numbers of temporary workers, part of whom becomes an extra hand when the core staff workload peaks.

Another practice to face the contingency of higher work overloads, partly resulting from staff downsizing, is an increase in the **staff overtime**. The latter, however, may become a costly solution and, therefore, many firms, particularly the large ones, avoid it (see data in table below). Moreover, in some cases, when the firm's

conditions allowed it, the **number of shifts** had increased as a way to respond to the need for more work and to maximize the use of equipment and facilities.

TABLE V.11: INCREASE OF LABOR SHIFT (% of firms applying each measure)

MEASURES		TOTAL (%)	INDUSTRIAL SECTOR		SIZE	
			Manu-facturing (%)	Services (%)	Medium (%)	Large (%)
Increase of extraordinary hours	approx.	33.3	31.3	35.7	40.0	26.6
	Only last 3 years	20.0	25.0	14.3	26.7	13.3
Increase of working shifts	Since 1990 approx.	16.7	12.6	21.4	6.7	26.7
	years	6.7	6.3	7.1	6.7	6.7

Hiring

Approximately half of the firms downsizing their employees also stopped **hiring**. The other half, in turn, keep them although in a more "moderate" manner. On the other hand, other few firms (6.3% of the total) opted for this way of stopping hiring instead of firing employees.

Together with training, hiring accounts for a means to acquire competences required by the firm. Moreover, it could be noted – as shown by the data of the following table - that specialized and managerial technical knowledge and skills have been demanded by a great part of firms. The high ratio (73.3%) of firms that in the last years has hired managerial personnel manifest a trend of **professionalization of management**, which, according to these figures, would be acquiring an increased importance in medium-sized firms, following thus the trend of larger firms. Regarding organizational improvement of firms, this is important, because through these managerial hirings, in general, younger

professionals are incorporated, whom due to their more recent education, bring new ideas and practices to the firm. Thus, they are an useful means to diffuse, within the firm, organizational innovations on which they have been socialized in universities and specialized programs as MBAs that have multiplied during the last years in this country.

TABLE V.12: HIRING (% of firms applying each measure)

MEASURES		TOTAL (%)	INDUSTRIAL SECTOR		SIZE	
			Manufacturing (%)	Services (%)	Medium	Large (%)
Hiring of technical specialized staff	Since 1990 approx.	58.6	56.3	61.6	57.1	60.0
	Only last 3 years	20.7	25.0	15.4	21.4	20.0
Hiring of new managerial staff	Since 1990 approx.	73.3	64.7	84.6	80.0	66.7
	Only last 3 years	50.0	47.1	53.8	60.0	40.0

2.3. Compensation system

The compensation system of a firm provides its members with signals, maybe the most concrete and with more motivating potential, with respect to the desired and valued behaviors and competences. In the current scenario of environmental complexity and continuous needs to increase efficiency, quality and rapidity of reply, the compensation system is an extremely relevant element in the changes required. Compensations, in this framework, need to be designed in such a way to adjust employees' behaviors to the objectives expected by the organization.

This conception about the compensation system – where the rewards are connected to specific results of individuals and groups, and are diversified, individualized and rendered variables – replaces other more rigid forms, which

have prevailed until some years ago – until the 70s approximately. Traditionally, compensations – an eminent way of labor compensations – were generally linked to the job positions, to the general compliance with work, without sending more specific signals on more particular goals. The main guidelines received by a worker in relation to his/her work came from the respective firm's formal descriptions - rules, work programs, job specifications, etc. - and from indications and control coming from the direct supervision. Contingent compensations were rather considered as extraordinary.

Studies related to countries of advanced capitalism show how this notion of variable and contingent compensation has been spreading in firms during the last two decades. In the U.S., for example, in the 70s, compensations seldom varied with the individual performance, even in firms provided with explicit plans on this respect –cultural inertia and resistance of some of the parties involved apparently restrained its implementation. However, at the end of the 80s, there were clear increases in variability of compensations. In accordance with the data of the Hay Group on compensation in firms, in 1989, incentives received by employees with upper levels of performance were 2.5 times higher than those received by employees with lower performance levels. In 1993, such difference had increased to 4 times. On the other hand, a survey (Towers Perrin) from 1995 found that 41% of firms offered a variable or incentive payment to non-executive workers, representing an increase of 6% with respect to the previous year (Cappelli, 1997: 190, 191).

Thus, this results in another form of organizational flexibility – **flexibility of compensations** -, which contributes to the **lightening** of the firm - compensations are strictly based on what is effectively done – and leads to render internal efforts more dynamic and oriented to the constantly changing needs and guidelines of the firm. This is one way of flexibility that, like that of the work organization, directly affects workers. As polyvalence makes diffuse the

identity of its job, the variable rendering of compensations brings uncertainty, even in “stable” positions, with respect to the magnitude of the economic means the employee will obtain for his life. In fact, these measures are a way to move part of the organizational risk to the individual employees (without moving, however, the eventual benefits in a comparable manner).

Certainly, all this has important effects for workers’ subjectivity. For them, future conditions become difficult to forecast, the sense of collective protection is lost, everything seems to be dependent on their own effort, increasing the vulnerability feeling. This, in turn, encourages an individualist orientation and the searching of mechanisms allowing to partly recover the sense of stability, of future projection. It could be thought that the national credit systems have provided one of the income stabilization sources, which compensate variations and enable workers to project his life with more tranquility, although in an illusory and deceptive way. On the other hand, these trends also impair the participation in collective organizations, such as unions, whose actions, according to the worker’s opinion, in many cases do not contribute very significantly in this new organizational context. On the contrary, given the habitual negative reactions of businessmen towards unions and their members, this participation is seen by many workers as an additional risk source.

Therefore, for employees this transformation is ambiguous. Younger and more energetic workers could see it as an opportunity; yet for the oldest it could be mostly a loss of benefits, labor conditions and security they had before. But this will also depends on the type of firm they work at. In less successful firms, maybe they will finally assume work burden and firm’s losses, without having shared its profits, subject to a non-compensated, “voluntary”, extra-effort. In this respect, it must be mentioned that the system has the special ability to generate such “self-exploitation” forms that no one could redeem, since the affected party is the main defender.

In consequence, this flexibilization is another important component of post-Fordist transformations, which directly involves workers therein. However, its implementation faces serious difficulties: from the already mentioned cultural or political resistances to the many practical design problems of the new systems.

In relation to this last aspect, in order that compensations have the expected effect of flexibility and adaptability, and so they effectively sustain changes, they should be linked to results in performance - individual, group, collective – so that performance indicators and relations between rewards and such indicators are clear, transparent and easy to understand by the parties involved; in addition, the results should be reasonably feasible to be obtained. This involves counting on procedures of measurement, evaluation, communication, assignment of compensations and adjustment of the system, complying with such requirements. All this is not simple, and the "alignment" of the compensation system with the rest of the organization's systems is a habitual source of problems within firms.

In Chile, the public support to the "linkage of salaries with the evolution of productivity in the framework of modernization" has increased (Albuquerque, 1999: 214). The same members of the public Labor Bureau see in such connection "a virtuous relationship both to improve productivity and salaries" (Espinosa & Damianovic, 2000: 65).

In the firms analyzed, we intended to measure and feature the presence of this variable and contingent form of salaries. For this purpose, we considered different kinds of incentives that we will discuss later. A first aspect we will consider is the **payment associated to productivity** without differentiating the specific modality used. The following chart shows the respective data.

TABLE V.13: NUMBER OF INCENTIVE TYPES PER PRODUCTIVITY PROVIDED BY THE FIRM (% of firms in each situation)

	TOTAL	INDUSTRIAL SECTOR		SIZE	
		Manufacturing (%)	Services (%)	Medium (%)	(%)
Not used	62.5	77.8	42.9	56.3	68.8
One or two modalities used	15.7	16.7	14.3	31.3	0
Three or four modalities used	21.9	5.6	42.8	12.5	31.3
	100.0	100.0	100.0	100.0	100.0
	(32)	(18)	(14)	(16)	(16)

Note: "Incentives per productivity" were considered as those associated to individual, group or establishment production or sales and to the firm's profitability.

It is observed that 37.6% of the firms use these incentives, being more used in service firms – this happens in more than the half of them -, where there is also a higher variety of incentives per productivity.[104] This shows that such incentives already have a significant presence in national firms, although with the manufacturing sector lagging behind. Likewise, as described by ENCLA 99, between 1998 and 1999 the coverage of these incentives, in terms of number of firms using them, would have increased by about 25%. Therefore, this is a practice that firms have increasingly adopted – even if there is a long way in becoming general both among the firms applying the procedure and among the employees covered.

[104] ENCLA 99 detects the presence of bonuses and incentives per productivity in 50.8% of firms. This higher figure could result from the way of doing the question. As we asked in a more particular way and only then added the compensations more clearly linked to productivity, maybe we have applied a more demanding filter to determine what is incentive per productivity or not.

More details of the types of economic compensations given are shown in the next table that also include information on the coverage of those incentives within the firm.

TABLE V.14: TYPES OF COMPENSATION GIVEN AND COVERAGE (% of firms not providing each type of compensation and % giving it to more than 40%)

FACTORS CONSIDERED TO ASSIGN AWARDS	Number of employees included	TOTAL	INDUSTRIAL SECTOR		SIZE	
			Manufacturing (%)	Services (%)	Medium (%)	Large (%)
Individual production or sales	None	60.0	75.0	42.9	53.3	66.7
	More than 40%	20.0	12.6	28.5	26.7	13.4
Production or sales per work teams	None	48.4	64.7	28.6	62.5	33.3
	More than 40%	38.7	29.4	50.0	18.8	60.0
Total production or sales of the establishment	None	71.4	66.7	76.9	80.0	61.5
	More than 40%	17.9	26.7	7.7	13.4	23.1
Individual quality results	None	96.4	100.0	92.3	100.0	92.3
	More than 40%	3.6	0	7.7	0	7.7
Quality results of work teams	None	90.0	94.1	84.6	100.0	78.6
	More than 40%	10.0	5.9	15.4	0	21.4
Quality results of the establishment	None	96.4	93.8	100.0	93.3	100.0
	More than 40%	3.6	6.3	0	6.7	0
Profitability of the firm	None	55.2	68.8	38.5	68.8	38.5
	More than 40%	24.1	12.5	38.5	12.6	38.5
Suggestions	None	83.3	82.4	84.6	81.3	85.7
	More than 40%	3.3	0	7.7	6.3	0
Performance / merit	None	67.9	73.3	61.5	73.3	61.5
	More than 40%	17.9	6.7	30.8	20.0	15.4
Years of service	None	65.5	68.8	61.5	81.3	46.2
	40%	27.5	25.1	30.8	18.8	38.5

Except for the case of seniority, the other types of compensation are related to the performance of the members of the organization. If we jointly take these nine types of compensation related to performance, we find that 87.5% of the firms apply at least some of them, 53.2% apply one or two, and 34.4% apply between three and six; with a marked higher use and variety of compensations in firms of the service sector. This would mean that compensations **for performance**, to a wide extent are generalized in Chilean firms, although those strictly associated to **productivity** would not reach to more than 45% of the firms as shown in Table V.13.

Reviewing the different types of compensations provided, some additional and more specific results, draw our attention:

(1) In the service industrial sector, the incentive more extended among firms and covering a higher number of employees is the assignment of compensations to work teams, in spite of a fair assignment of individual incentives to part of the staff. In both aspects, the use of incentives is very superior to that implemented in manufacturing firms. The assignment of rewards for profitability of the firm is also higher in service firms.

(2) In all types of firms, the assignment of compensations per results associated to quality is very scarce. Additionally, rewards for employee suggestions are not usual.

(3) On the other hand, compensations for years of service remain in about one third of the firms, mainly larger ones.

These figures may be compared with those from firms of the U.S. From these, in 1996, 91% used individual incentives, 87% incentives to groups or work teams, and 69% assigned bonuses per profitability of the firm (Lawler, Mohrman,

Ledford, 1998: 34) vs. 40.0%, 51.6% and 44.8%, respectively, in Chilean firms. So, although compensations per performance are already incorporated in national firms – and this could be seen as a substantial change-, the assignment of more specific incentives - per group or individual - still has a limited implementation – in not more than half of the firms. In addition, its coverage is restricted: they cover a reduced number of workers; sometimes only sales staff, or some particular type of production operators.

Nevertheless, in firms where these incentives are applied, the variable component of salaries could be very significant for the workers involved. In the firms we analyzed, the variable amount was very different: from 15% to 40% or more. At a country wide level, according to ENCLA, in average, the variable component of salaries was 27.5% in 1998 (Espinosa y Damianovic, 2000: 71).

Deepening in the reality of firms, various additional aspects appear which complete the information provided by the above figures.

In an important proportion of firms, the use or extension of these incentives is relatively recent, during last years, and it is a practice that has become more habitualized.[105]

One problem repeatedly mentioned by the workers with respect to the system is that the **basic salary** is very low. Then, with this deficient basis, even with the aggregate of incentives, the total is not very significant. Only with the addition of incentives workers earn enough to maintain their usual standard of life, according to their own declarations. Thus, in such conditions, incentives do not properly

[105] According to ENCLA 99, workers themselves would have developed a favorable attitude towards the payment of bonuses and incentives of productivity. In this analysis, it is mentioned that 80% of workers would share this favorable attitude, however, the representation these workers may have is not clear in a research whose focus is the representation of firms, not workers.

generate in workers the feeling that their effort is fairly compensated (ML4, ML11, MM15, MM14).

Besides, workers see a lack of correspondence between improvements in productivity and what they receive through incentives and bonuses. The members of one of the firms studied stated the lack of proportion of what they received given the situation of the firm: exports have tripled, number of workers has been reduced, while the variation of salaries was very little.[106]

An extended concern among managers was that some bonuses were assumed as a customary fact. Workers take for granted they are going to get them and in consequence, incentives stop being orientators and dynamizers. In the words of a production manager (ML18): "Production incentives had their effect at the beginning. Afterwards, they are part of the knapsack of the [worker] and they no longer value it. He knows he is going to receive a production incentive ranging from such and such amount of money. But, it is something acquired and he does not appreciate it as much. It is effective at the beginning, but then, it does not anymore" (4105). In part, such problems could be associated to the way these compensations have been designed, which does not take into account the psychosocial reality involved. Likewise, in many cases the calculation of incentives had complications and was not totally transparent for workers (ML11) and the assignation of them, in diverse situations – according to workers' appreciation – depended on interpretations and was too "subjective" (4036).

The problems of implementation of compensation systems were frequently associated to weaknesses in procedures of **performance evaluation**. In the interviews it was common to hear criticisms, both from managers and from workers, with respect to the evaluation of performance. In a firm of advanced services (SM22), expressing the lack of relationship between evaluation of

[106] We will see more about it in the next chapter, collecting workers' perceptions.

performance and the compensations received, a female worker commented “if my partner at the office spends the day polishing and painting her nails for the same money, while I am working all day long, and she receives the same 3% [of award] that I do, then, I will better dedicate my time to painting my nails.” This, which was said in a focus group, was confirmed, in turn, by other participants: with current evaluation and compensation systems – they said – it was better “to paint their nails” (4250, 4251).

The evaluation of performance has a recognized value by managers, but its application has multiple difficulties, as it was illustrated in the previous paragraphs. The evaluation of performance is used, fails, becomes a routine, is then abandoned, is applied again, some problems are solved, but others not, etc. It is an instrument very sensitive to the psychosocial process of its implementation. Its effectiveness depends largely on the general strategy used to communicate the system and to train people in charge to apply it. On the other hand, the more the evaluation of performance is linked to compensation distribution, the more sensitive will be the instrument to the psychosocial contingencies of its application.

In some manufacturing firms, managers showed weaknesses of the more collective bonuses. They received complaints from workers claiming they worked more than others, receiving however the same: the others would be taking advantage from their effort. These managers were thinking to face this by the way of designing more individualized systems so as to be able to “measure productivity for each of them” (MM14) (4069).

In many of the firms where unions existed, these workers’ organizations had participated in the bargaining of diverse incentives. On one hand, this contributed to provide more legitimacy to the system; but, on the other hand, it generated some tensions. In relation to this last aspect, a manager, for example, said that

the general trend of the union was to obtain equal compensations for all workers and not differentiate them according to their performance. This could show a reaction of union, in some cases, in front of the existence of too low basic salaries. On the other hand, it could also show cultural or ideological conceptions about what they understand by labor “equity” and “justice” in the frame of the firm. New conceptions on compensations undoubtedly differ from those prevailing in the firm during past decades. Therefore, it is foreseen the existence of differences and confrontations in this respect.

In addition, there is, especially in the service l sector, some firms with more sophisticated systems through which diverse types of compensations are complemented, including rewards for results of the firm and organizational unit, and for compliance with individual objectives. Thus, one same worker is encouraged both to improve his own performance and to contribute, for his own interest, to organizational units he is part of. Some few firms under study (SL20, SL21, SL31) had achieved an important degree of complementation and integration among the different kinds of compensation, obtaining important improvements in the individual performance and in the collaboration of groups and organizational units. They also had a higher diversity of focuses: not only productivity goals, but also quality goals in service to customers. Besides, the evaluations of performance included diversity of perspectives – coming from diverse evaluators in a procedure usually called “evaluation of 360 degrees”-, and they closed each evaluating cycle with the establishment of commitments in the accomplishment of goals and the definition of support for future training (4188, 4190, 4197-4213).

In spite of the transformations, the seniority continues to be considered: about one quarter of firms apply compensations for this factor, covering a significant number (more than 40%) of their workers. Moreover, its application is not only a carry over of the past. A firm, for example, has agreed just the last year the

award of a bonus for having completed 10 years of service in the firm (SM28) (4164).

Additionally, in advanced capitalism countries there are mechanisms involving workers in the ownership of the firm through the award of shares or stock options. This leads to a more clear perception of interest complementation among workers and management of the firm. In the case of the U.S., among the biggest firms, in 1996, 68% of them had stock ownership plans for employees, and 87% had stock option plans, in both cases with a wide coverage of employees (Lawler, Mohrman y Ledfford, 1998: 34, 35, 224, 225).[107] In the national firms analyzed we did not find anything similar. Neither it seems something to be in the managerial agendas for the near future, even as a subject of discussion .

On the other hand, in some Latin American countries, such as Argentina and México, "**productivity covenants**" have developed in specific industrial sectors with the participation of unions and entrepreneurs, including the support of the State. These have constituted agreements where workers accept diverse forms of change and flexibilization in work organization, and benefits are agreed upon for workers based on the achievement of productivity goals (Novick, 2000; De la Garza, 1999). It could be said that this represents an attempt to carry out post-Fordist kind of commitments with the encouragement and support of the State; while this state intervention partly represents a Fordist logics. In Chile, at the beginning of the 90s, there were some sectorial agreements with participation of the State in the search for "social concertation" after the ending of the military government (Campero, 1998); but, currently, there is nothing equivalent in most firms. The most similar are the agreements achieved by the unions of some large public firms with their respective administrations. Noticeable examples of them, while being exceptional in the national context, are the "strategic alliances"

[107] In the case of stock option plans, for example, in 47% of US firms the plan comprised more than 80% of their staff.

developed among the unions of Codelco and BancoEstado with their respective corporate managements.

2.4. Conclusions on changes in the management of human resources

As we have reiterated, the management of human resources has not been among the priorities of organizational improvement and has held, for a long time, a secondary and subordinated place in the firms. In recent years, these practices have continued in their “underdeveloped” condition.

For the enhancement of organizational reflexivity, to deepen decentralization, to develop autonomous work teams, and to develop the competences required under the new enviromental conditions, it is required to transform the management of human resources. However, in two of every three firms this change was not being achieved.

As we have seen, this is clearly shown in training. Although in general, it has increased, firms are in what could be called the stage of “easy training”: with poor systematization, without considering the detection of needs, without a diagnosis of the existing competences and analysis of the required ones. Thus, training is applied above all regarding to what is easier (computing, languages, administration). With such characteristics, training, such as the management of human resources in general, is disconnected from the strategy of firms.

In the current configuration of management and practices, the notion of achieving the development of organizations relying on the cognitive skills and experience of their members is barely incorporated. The field has not yet been prepared, except for a few selected firms, to go forward with the application of knowledge management or management by competences procedures or to develop organizational learning capabilities in them.

What Chilean firms do have extensively adopted are practices of staff reduction, facilitated by the institutional framework. However, associated with the emergence of more legal restrictions for the layoffs, the firms' main focus has moved to regulate hiring, which has had a notoriously slow growth, specially if compared to the growth of firms' activities. This results in a more adjusted staff; which in addition to polyvalence tends in general to increase the workload of employees.

In relation to the prevailing corporate vision where organizational knowledge is seen as a matter only for the upper levels, there is a high concern for the managerial renewal and the respective increase of professionalism. This change has been sustained during the 1990's and in the future –through new managers with recent university education- could eventually be the foundation for the introduction of new conceptions and the redesign of human resources management.

As for compensation, firms have been experiencing a major change recently. The use of incentives has increased and has become widespread so that the variable component of remuneration has become gradually more significant This change is another factor that alters the old Fordist labor stability, in this case regarding wages. As long as this occurs, in some firms, while workers receive extremely low basic salaries and there are problems in the design of incentive systems, the results are higher uncertainty for workers, further pressure at work, increased feeling of uncertainty and job deterioration.

CHAPTER VI. WORKERS' EXPERIENCE CONFRONTING ORGANIZATIONAL CHANGE

INTRODUCTION

As part of the set of transformations that the different firms have undergone during the last few years, and which we have reviewed in the preceding chapters, there have been other changes concerning the nature and organization of work, and the manner in which workers relate to the firm. Macro-structural approaches have dealt with such problems as the persistent high unemployment rate and the deterioration of formal jobs (for instance, in terms of the increased percentage of workers lacking social security) (ILO, 2001); in contrast, very little is known about the work itself and the job experience, considering the workers' own perception and assessment. How do they perceive the job they perform, their relation with the firm, their degree of empowerment -a term used in the current management discourse-, or the quality of their work? Such a review can lead to the addition of new dimensions to such problems as job deterioration, or to enrich the discussion of what ILO has come to call "decent job" and that others also call "dignified job" (Hodson, 2001).

Accordingly, we will address work and the changes it has undergone in Chilean firms, considering three main aspects: (1) the changes that have affected the job itself, its very nature, (2) the changes concerning the workers' technical and reflexive participation in the overall improvement of the job and the organization, and (3) the social and normative weave surrounding labor relationships within the firm.

The **first focal point** of our study concentrates, then, on the **job itself** and its characteristics. This shows strong connections with job motivation, particularly

with intrinsic motivation, which derives from the interest, value and attraction exerted by the task itself and its potential, as opposed to the merely instrumental motivation associated with others rewards the job allows to obtain. For over three decades already, different approaches and models have been spread around the world, which have tried to design work as a more humane and enriching experience for workers. Recent approaches such as Total Quality Management, Flexible Specialization and Lean Production have addressed the issue again within a new framework of organizational transformations. How much has been achieved in Chilean firms? Which positive changes have been accomplished? What are the current trends? This falls within the first aspect we want to deal with.

The **second focal point** has to do with worker **participation**. This term carries significant cultural load, which may cause some confusion; consequently, we will make some specifications. Participation is an old issue, which from time to time, undergoes certain transformations and emerges again in a different form. In its latest form, as mentioned in academic or management discourse, it is associated and closely bonded with technical improvement. Thus, for example, it is a central element in Japanese Continuous Improvement (Kaizen). Technical participation incorporates a **reflexive** component to the work activity that is completely opposed to Taylorism and could well be classified as “post-Fordist”. This implies also a rationalization process that connects the members of the firm in a different way. It is possible to state that it integrates elements of communicative rationalization that reach the operating core level of the organization, something completely absent in the Fordist model.

In order to address this topic with greater precision, we should make some distinctions concerning participation. Hence, it is possible to differentiate between the following dimensions:

(a) **Technical participation**, as to the different tasks, equipment, procedures and work organization. This is a type of participation that leads to the improvement of process efficiency and increased productivity. In its simpler forms, it may lead to specific improvement in particular and separate work units, or, at more complex levels, it may address entire work processes including several units at the same time. In Japanese companies and others that have also applied them, these procedures have resulted in multimillion savings in costs and increased productivity (Womack, Jones & Roos, 1990).

(b) **Participation for the analysis and improvement of safety and other work conditions**. In general, this creates a work environment that is materially more favorable; in addition, it contributes to cost reduction (for example, as a result of fewer accidents).

(c) **Participation in the firm's more general actions and decision-making** -in its policies and strategies. In some European countries, like Germany, workers are part of firm co-management instances, which is supported by the German legislation (Jurgens, 1995). In this case, the workers' involvement and participation is greater. In Chile, a few companies from the public sector include such forms of participation, in which the firm and its workers have established "strategic alliances".

(d) **Participation in reward definition** -remuneration, incentives, bonuses. This usually takes the form of collective bargaining within the legal definition framework provided by the Labor Law. In this case, participation has been traditionally mediated by the workers' union, which acts as their representative; but in many firms this organizational entity does not exist or has reduced coverage.

(e) **Participation in firm ownership,** which can be found in countries like the United States (Appelbaum & Batt, 1994; Lawler, Mohrman & Ledford, 1998); but in Chile its occurrence is only marginal.

We will here address the type of participation bearing a more direct relation with organizational improvement, namely (a), (b) and (c).

As mentioned earlier, however, for us the most important aspect of this participation is reflexivity, for we believe this is the core element in the new trend in participation valuation.

Our basic questions will then be: How much of this **reflexive participation** has been incorporated in Chilean companies? And, what are its characteristics?

The **third aspect** we wish to consider, which is also related to participation and reflexivity, involves the firm's **social and normative tissue** that shapes the interaction between the entrepreneurs and the workers and confers cultural density to the basic instrumental relationships established between them. This is another way of approaching firm reality beyond the work itself. It refers to such aspects as reward system management, general communications within the firm, policies and other aspects related to the internal institutionalization. The human resource management system can greatly influence this particular dimension of the firm's reality.

This normative aspect has to do with the social agreements being shaped within the firm, whether tacitly or formally. In this respect, there has been a debate in recent years about "labor citizenship" (Morris, 2002; Montero and Morris, 2000). It is in this context that we must situate, for instance, the aforementioned "strategic alliances" between entrepreneurs and workers. Approaching the firm in these terms also arises the problem of "**democratization of the workplace**", in other

words, the transfer of argumentative and representation dynamics typical of the society's public sphere to the firm.

Certainly, this is yet another important aspect of the actual situation of the workers in the firm. Therefore, we will also pose some questions regarding this matter. How do workers perceive the firm as a normative social space? After thirteen years of democratization in the country, how is this manifested inside the firm? How are advances in democratization perceived there? What obstacles have they faced?

Methods used to collect information

Empirical information has been obtained from a survey conducted on 673 workers and from group sessions or interviews conducted with 90 other workers. The sample distribution of the workers surveyed, in terms of industrial sector and size appears in the following table.

TABLE VI.1: SAMPLE OF WORKERS, ORGANIZED ACCORDING TO SIZE AND INDUSTRIAL SECTOR OF THE FIRM WHERE THEY WORK (number of workers, in absolute figures and percentages)

SIZE	INDUSTRIAL SECTOR		Total
	Manufacturing	Service	
Medium (50 to 199 employees)	152	147	44.4 (299)
Large (more than 199 employees)	189	185	55.6 (374)
Total	50.7 (341)	49.3 (332)	100.0 (673)

The sample was selected in such a way that it could represent the diversity found in the companies under study in qualitative terms. Strictly speaking, the universe consists of workers from medium and large firms belonging to the machinery & metal, food, commerce, communications, and finance sectors located in the

Metropolitan Region. Extra care was taken to guarantee representativeness and avoid particular preferences. Although this sample does not allow for statistical inference, the representative nature of the data collected reveals general patterns and enables us to outline quantitative generalizations that go beyond the restricted limits of case studies.

The study considers permanent workers –temporary workers are not included- hired by medium-sized and large companies situated in the Metropolitan Region. The size and location of these firms can lead to believe that their situation and work conditions will be, in general, better than those of the firms not included in the universe of study. Therefore, our goal is to determine the characteristics of the work of these workers who, given the relevance and central location of the firms they belong to, may be called “central” or “core workers”.

Some of the basic characteristics of the selected workers appear in the following table.

TABLE VI.2: SAMPLE OF WORKERS, ACCORDING TO GENDER, AGE, EDUCATIONAL LEVEL AND FIRM INDUSTRIAL SECTOR (% of workers)

		Total	INDUSTRIAL SECTOR	
			Manufacturing	Services
GENDER	Male	69.8	85.8	52.6
	Female	30.2	14.2	47.4
	Total	100.0 (649)	100.0 (337)	100.0 (312)
			p = 0.000	
AGE	18 to 30 years	29.3	23.3	35.9
	31 to 40 years	40.3	42.0	38.5
	41 to 65 years	30.4	34.7	25.7
	Total	100.0 (635)	100.0 (331)	100.0 (304)
			p = 0.001	
EDUCATIONAL LEVEL	Elementary to incomplete High	18.8	30.2	6.9
	Completed High School Incomplete Higher education	45.2	50.6	39.6
	Higher Education completed excluding college	19.3	10.9	28.0
	completed	16.7	8.3	25.5
	Total	100.0 (659)	100.0 (338)	100.0 (321)
			p = 0.000	

69.8% of the surveyed subjects were male workers, which corresponds to the general participation share in the country's economy by gender (65.0% according to the 2002 Census), although the female proportion is significantly higher in service-oriented companies where, on a national scale, female employment is bigger. [108]

[108] In 2000, of all male workers employed in non-agricultural activities in Chile, 61.9% was in the service sector, while 87.1% of all female workers were employed in such sector (ILO, 2002: 116).

The educational and age profiles also present differences between these two sectors. As regards age, in the service sector there is greater hiring dynamism, and the proportion of young personnel and with less seniority is higher. On the other hand, as expected, advanced service sectors like telecommunications and finance have a greater proportion of employees with higher educational levels.

The following text is organized according to the three focal points mentioned. In the first section, we will address **participation and reflexivity** and try to determine how and to what extent they occur in Chilean companies. In the second, we will consider **the work per se**, taking into account both the present state of affairs and the changes that have taken place in the last few years. This will also include analysis on some of the effects deemed relevant for the quality of work life, particularly the psychosomatic effects that may be derived from the characteristics of work organization. In the third section, we will address the firms' **normative dimension**, analyzing reward distribution, changes in the employment relation and some other aspects of the interaction between employees and entrepreneurs.

1. PARTICIPATION AND REFLEXIVITY

Technical participation referred to work is a key instance to incorporate the workers' knowledge, especially their tacit knowledge, into productivity, quality and work conditions improvement (Kenney & Florida, 1993; Nonaka & Takeuchi, 1995; Senge, 1999; Baumard, 1999). It constitutes a central element in the approaches to change in work organization, such as Total Quality Management, Organizational Development, Lean Production and Organizational Learning. Additionally, the practical procedures corresponding to these approaches rely basically on teamwork (Womack, Jones & Roos, 1990), where participation consolidates.

This participation configures a sort of reflexivity of the entire organization, which includes the participation fostered and developed at the operating core as a very important element. This involves reviewing and thinking about what is done and objectifying it in order to introduce changes in the procedures and practices. The development of these reflexive processes is by no means easy and it normally occurs against the flow, opposing cultural patterns, habits, power networks and structural rigidities. Consequently, it becomes necessary to resort to large support scaffolding, particularly psychosocial methods and techniques.

As we manage to go deeper into these reflexive activities, they acquire certain connotations and characteristics of a “double loop” learning, as called by Argyris & Schon, or “deutero learning”, as called by Bateson. In other words, at least to a certain extent, not only do they lead to doing things better, but also to review the criteria and mental models that make people do things the way they do. This is a deeper, more substantial scrutiny. Its results may come as radical changes, such as the ones proposed by Reengineering, but they do not need to be so radical. Furthermore, the extreme forms of Reengineering have been widely criticized and even reviewed by its own initiators (Hammer & Champy, 1994; Hammer, 1996).

Such reflexivity is characteristic of advanced modernity (Beck, 1992; Beck, Giddens and Lash, 1997) and, in this case, it is expressed at the micro-organizational level of society and, particularly, is manifested at the level of the workers themselves. To a great extent, it operates from the bottom up, although its results are filtered, selected and organized by the higher levels, which decide and articulate the different changes and improvements. This reflexivity about the work itself and its organization is the counterpart of the reflexivity that, at firm management level, is manifested as organizational diagnosis practices, benchmarking, corporate cultural studies, environmental and strategic planning

analyses. In this last type of reflexivity, the upper levels analyze the organization as a whole in its adaptation to the environment and this is carried out mainly from the hierarchical top downwards.

Reflexivity about work –the upward dimension- can take several practical shapes. As of the 1970s, some practices developed in the United States in particular had spread under the generic label “Organizational Development”. In the 80s, they expanded globally and reached practical popularity showing great effectiveness in Japanese companies: Quality Circles, Continuous Improvement (Kaizen) and Total Quality Management, all names that refer to a similar logic. Many of the variations of these approaches to work practices and organization revision and improvement have proliferated in companies throughout the world, with labels that in many cases obey to the particular interests of consultants for better marketing of their procedures.

Anyway, the **axes** or basic pragmatic requirements for this revision and reflexivity from the bottom up are:

(a) **Systematic revision** of the manner in which the work is carried out and activities organized.

(b) **Participation** in this process of the firm’s members involved, who have first-hand knowledge about the work; this knowledge is largely experiential and has not been formalized (“tacit knowledge”).

(c) Procedures that train these workers to successfully conduct such revision, which is not a habitual or intuitive procedure. This involves **methods to conduct problem analyses**, examples of which are Ishikawa’s causal analysis and Pareto’s diagrams. These are research

methods based on empirical data, following a logic of action-research and are enunciated in simple terms.

(d) A **structure** within the organization, in a way "parallel" to the formal organizational chart, which is aimed at coordinating this whole task, implementing it, motivating it, coordinating it and evaluating it. For that purpose, the minimum requirements are: somebody to coordinate the general activity who has been approved by the hierarchy to which s/he must report; and group leaders.

(e) Located at the center of the task are the creation and operation of diverse **teams** of workers. The reflexive activity must be carried out on a collective basis and must involve the worker participation. That is the reason why it is supported by teamwork, which translates into frequent meetings, with groups receiving systematic training to function as teams.

(f) One last axis that crosses all of the above, is **understanding the sense** of all this activity, what some call its "philosophy". This means to understand the foundation of this participative reflexivity, and the importance of tacit knowledge externalization to achieve organizational improvement and understand the need of a bottom up process. Therefore, it involves realizing that we are not dealing with a few quality circles here, or teaching statistical control or asking the workers for spontaneous suggestions.

The implementation of improvement processes that have effectively included such key elements has contributed to the development, flexibility and competitiveness of many companies. The great successes of Japanese companies in the 1980s rely heavily on this (Kenney and Florida, 1993; Nonaka &

Takeuchi, 1995; Womack, Jones & Roos, 1990). Also, during the last two decades it has contributed to the improvement of organizations around the world.

The question that we ask ourselves, then, is how and to what extent this occurs in Chilean firms. As a first indicator in this matter, workers were asked about the existence of meetings, both within their own section and with people from other sections, in which they participate that could help address and improve their work processes as well as the quality of the final products.

Considering the total number of workers, the result obtained revealed that not more than 40% participates in meetings organized in their own section. In any case, there are statistically significant differences [109] between manufacturing and service-oriented companies. It is in this last type of firm that these practices have been mostly adopted, particularly in the area of Sales and Customer Service (46.6% in this area vs. 37.0% in Administration and 32.7% in Production).

Employee meetings intended to address the different processes and seek their improvement from a more global perspective, including people from **different** sections, among whom there are interrelations, are even less frequent. Only 24.7% report their existence. If we compare by industrial sector and by area, the pattern we have already seen is repeated: greater reflexivity in Services, particularly in the areas involving personal contact with customers, and in Administrative areas.

Facing other more specific questions, 24.0% of the manufacturing workers state that continuous improvement practices were applied in their own section, and 26.8% of workers employed in service-oriented companies say that there are or there has been, in the last three years, groups of workers in charge of reviewing

[109] The statistic signification of the association between cross tabulations is measured through chi-square.

their own practices. In other words, we are speaking of approximately a quarter of the total number of workers involved in this type of activity.

So, just between one quarter and one third of the workers see that these reflexivity and improvement practices are conducted in their workplace. The figure is low, especially considering that we are talking about medium and large firms, those that are supposed to be the most advanced and more able to incorporate modern practices.

But there is more to this, in terms of the peculiar characteristics these procedures adopt in Chilean firms. Extremely few cases present the previously mentioned key characteristics. Our in-depth study of firms has found such features in less than 10% of them.

Thus, empirical results evidence that most meetings organized with workers have the following characteristics:

(a) Unstructuring.

They lack a method or systematic procedure to facilitate or orientate participation and reflexive tasks (which, for the majority of the people involved are **not** habitual behavior). Some managers simply put together a group of employees in hope that something will come up spontaneously.

The administrator of an important store of a supermarket chain described the situation: “We gather in the different firm’s areas. We conduct informative weekly meetings, monthly meetings; we have breakfast meetings with employees, where we can also talk and say things (…). If ideas, suggestions and critics to the system are expressed in good faith during these meetings, they are welcome (...)” (SL25).

In a large manufacturing firm that is part of an important international holding, the Human Resources Manager told us: “The Production manager held a series of meetings with a group of workers and obtained feedback concerning their proposals and what they did. They did this the last year, but this year they haven’t done much. But from time to time they get together with the employees but not on a formal basis, we don’t have a calendar, a schedule….” (ML11).

This is why their effectiveness is limited and they critically depend on who the moderator is or other circumstantial factors.

This seems to be linked to a mental pattern that still prevails among many executives and that makes them reticent towards systematizing these interactive and communicative activities referred to work, as if that badly undermined spontaneity or limited the free interaction flow. Though, when brought to reality, the exact opposite occurs: well-planned design and systematization of the procedures, which benefit from the extensive knowledge available in psychosocial matters, allows for the creation of conditions that can facilitate broader, more intense and more interactive participation.

(2) Verticality.

These meetings follow a communication pattern that is predominantly vertical. There is no collective, horizontal, interactive dialog; instead, there is individual communication with the moderator. In addition, these meetings are very often massive and with short duration.

Thus, the meetings with employees seem to pursue simpler and more basic goals: to spread information, get to know the workers' opinions but not to take any further steps towards collective and interactive reflexivity.

In a focus group with employees of a service-oriented firm of an advanced sector that combines finance and electronic communications, one member said: "Whenever we have meetings or breakfast meetings [with managers and employees], it is always from top to bottom, but never bottom to top. In general, breakfasts are used to inform this or that, this or that change: the policies, what we want, where we are headed [is stated] but all is from top to bottom" (SM22).

The CEO of a medium sales firm said in this respect: "The Sales Department conducts meetings every week, gathers all re-stockers, and ideas are shared. [The idea is] for people to know what each individual is doing so that they support each other and they express their points of view regarding each other" (SM11). Here, the use of meetings as a means of socialization is highlighted. This could be understood as a previous phase: as the transition from a basically vertical firm with no collective spaces for communication towards a firm where the instances for greater communication begin to develop. Nevertheless, the next steps towards reflexivity still are not taken.

The operations manager of another large service firm where the practice of regular and massive breakfast meetings has been implemented, described the atmosphere in them: "Although these conversations may be informal, the moderator [a manager] communicates values, good habits, experiences. He shows the path they can follow within the firm and infuses them with the spirit of the firm. He [also] learns about the problems the different workers may be undergoing" (SL25).

> The usefulness of these meetings cannot be denied, but their socialization, commitment and information goals and results do not correspond to reflexivity, nor do they constitute a tool to substantially improve work practices. On the other hand, it may be argued that they reiterate, maintain and reinforce traditional relation patterns that are vertical and rather paternalistic.

Going back to the participation and reflexivity general issue, we have, on the one hand, the fact that the workers of the firm's operating core barely adopt collective reflexivity practices. However, the data also show that these practices do tend to shape up in higher hierarchical levels, particularly when referring to matters like strategy and interaction with the environment, as we have seen in chapter III. At this level, such activities also display a significant degree of interactivity and horizontality. To a certain extent, they may even spread to the supervisor level; thus, for example, 42.2% of the supervisors surveyed say they attend regular meetings with employees from other sections to address the situation of the different processes and look for improvements (as compared to 21.3% of the workers not ranked as supervisors who attend this type of meetings).

The managers and executives of the companies under study indicate, in addition to the meetings, the existence of other channels to promote employee participation. The one that stands out the most is the **hierarchical way**, which is used to give due course to the individual ideas or suggestions. In this respect, supervisors act as mediators who are in turn consulted from above. In other words, this would constitute a typical hierarchical channel, **vertically ascending**, that basically operates connecting individuals from different levels.

According to the data collected, the workers seem to have easy access to this last way. 71.5% of the total say, for instance, that they feel sufficiently free to talk with their boss about work issues. So, one might conclude that this way is kept

open as a means to analyze work and think of possible ways to improve it. In other words, and although it may not be the most effective way, this channel would permit that the workers' experiential knowledge be considered and employed, at least in part, within the organization and put to work for the improvement of work activities. Within the manufacturing sector, however, access is markedly and significantly lower (60.7% vs. 82.7% in Services).

Assuming that this way works, it would contribute, as a side effect, to **reinforcing the valuation of the hierarchical-individual channel as a means for technical participation**. In other words, it may constitute a positive feedback factor towards the more legitimized hierarchical-individualistic culture, as opposed to an egalitarian one, in which groups, horizontality and collective action are valued. Thus, this of participation would also operate reinforcing the reproduction of prevailing socio-cultural patterns.

The previous discussion has dealt with participation **channels**. In addition, it would be necessary to consider if the workers feel that they can **effectively** contribute their knowledge to the firm in order to improve it, regardless of the means utilized (group or individual, hierarchical or not).

In this sense, and in contrast with the positive results obtained about the existence of channels, only 44.8% of the total (or 40.6% if we exclude supervisors) consider that **their ideas are consulted and used if deemed valuable**; this total ranges between 38.1% in the Production area of manufacturing companies and 51.8% in the Sales and customer service areas.[110]

In this respect, chiefs do not often consider the workers' opinions and proposals about operations or machinery. During a focus group session with machine

[110] In turn, a very small percentage, 12.4% say that their ideas are "constantly" consulted and used.

operators in a large manufacturing firm, the following conversation about this topic took place between them:

> Operator 1: “I was working on a prototype of a new regulator, that is, changing the […], and I told [the bosses] that this was not going to work; it was not going to work because the tool already breaks if I do it this way, so with the new procedure it would be worse. So they told me ‘no, you have to do it anyway.’ But it’s not going to work, I said… They eventually realized: it didn’t work.”
>
> Operator 2: “The engineers need to come down and talk to us…”
>
> Operator 3: “I’m going to mention another case. Last year, I had a problem with some metal cuts; the cut fell either too long or too short. I knew that… I had to fix the machine with a wire to regulate height and all that. So they took me to speak to […], who was the boss. […] So I told him, go one day to the plant, go to the machine and I’ll explain the problem. So he came one day and I explained everything. ‘We are going to fix it,’ he said. Well, the year went by and nothing has changed, the machine has not changed…” (ML4).

The acceptance of workers’ contributions is certainly higher in the case of qualified workers or workers with specialized training (50.4% vs. 32.5% in the case of non-qualified workers). But even so, it must be noted that this figure indicates that half of the qualified workers consider that their contributions are not taken into account or used, even if they deserve to be. This may be interpreted as a great waste of knowledge and experience, in both medium and large firms.

This limited acceptance of the workers' ideas goes hand in hand with the perception they have about the interest the executives of their firm have and their willingness to listen to them, as seen in next table.

TABLE VI.3: INTEREST IN THE WORKERS' IDEAS AND WILLINGNESS OF THE EXECUTIVES TO LISTEN, BY INDUSTRIAL SECTOR AND AREA OF THE FIRM (% of workers)

		(%)	INDUSTRIAL SECTOR		FIRM AREA		
			Manu-facturing (%)	Ser-vices (%)	uction (%)	Ad-min-istrat-ion (%)	Sales
INTEREST SHOWN BY FIRM EXECUTIVES IN LISTENING TO WORKERS' IDEAS AND SUGGESTIONS ABOUT WORK	**Great**	9.1	6.6	11.8	6.4	10.9	15.5
	Fair	30.5	25.4	36.0	25.1	32.7	36.4
	Little	41.2	43.2	39.2	43.5	40.8	34.9
		19.1	24.8	13.1	25.1	15.6	13.2
		100.0 (645)	100.0 (331)	100.0 (314)	100.0 (283)	100.0 (147)	100.0 (129)
			p=0.000		p=0.003		
NUMBER OF TIMES IN THE LAST THREE MONTHS THAT AN EXECUTIVE HAS VISITED YOUR SECTION	**Almost every day**	12.2	11.6	12.8	11.3	7.0	18.6
	Every week	13.6	11.0	16.3	9.9	11.3	23.3
	Two or three times a month	28.8	22.3	35.6	22.7	35.9	32.6
	Never	45.4	55.0	35.3	56.0	45.8	25.6
		100.0 (639)	100.0 (327)	100.0 (312)	100.0 (282)	100.0 (142)	100.0 (129)
			p=0.000		p=0.000		

Note: In cross tabulations, the statistical association between the different variables is measured through chi square. The tables include the significance level (p).

It may be said, undoubtedly, that the real interest, as shown at the practical level, is fairly limited. Only 9.1% of the workers perceive this characteristic in their

executives. The “fairly” and “great” categories total 39.6%, which in the Production area goes down to 31.5%; in Sales and customer service, it goes up to 51.9%.

Another indicator of the interest attributed to the workers’ possible contributions and the valuation of their experience is the **presence of firm executives side by side with them**. The physical proximity that Japanese executives maintain with their employees is well known. Similarly, one of the reiterated recommendations for executives during the last few years has been to “walk” through the firm; not to be locked in the artificial environment of their office, but to wander through the organization and get first-hand knowledge of the different processes taking place in it. In contrast, most of the executives in Chilean firms are definitely not wandering executives; **their absence in the different workplaces is obvious**. 55.0% of the workers of manufacturing firms have almost never had firm executives near them, showing some interest in the work they perform. This is a highly impressive figure.

These “absent executives” are more likely to be found in large companies, but size is not the reason for this state of affairs. In medium businesses, executive absenteeism is 69.6% vs. 77.6% in large businesses; that is a mere eight percent point difference.

In addition, it is not the noise and dirt of the plants that drives executives away. Their absence is also highlighted in the administrative area (81.7% of administrative employees say they never or rarely see them).

How can this situation be explained, then? We can only suggest some answers to it. A sort of **verticalist culture** seems to dominate the scene; one that has prevailed for a long time and with has great inertia. The use of hierarchical channels and individual relationships with paternalistic proclivities as a means to

improve work is preferred and is strongly legitimated. Group logics with systematized collective participation are perceived as strange in most companies and they are not part of the prevailing cultural patterns.

For this same reason, the habit of participation has consequently not developed in this context. Workers have not acquired the necessary competences for teamwork or group reflection. With the exception a few companies, the circuits that feed workers' passiveness have not been broken. This promotes the occurrence of situations like the one reported by a human resources executive in a manufacturing firm: "One provides them with instances of conversation, one meets with them, but they remain silent. […] Inside the plant they are very good at talking or criticizing; but when they are given the possibility to openly propose changes or improvements they don't; in other words, they criticize but they do not make any proposals nor do they fix things themselves" (MM8).

Thus, a very evident contradiction can be derived. On the one hand, most managers share the opinion that "of course, workers should participate." On the other, the opportunities and instances to participate show all the weaknesses we have noted.

The prevailing situation –lack of participating experience and lack of mechanisms to facilitate participation- leads to the fact that a significant number of workers, including qualified workers, question the usefulness of their possible contributions. So, 34.1% say: "changes in the workplace are technical matters in relation to which we, as employees, have nothing to say." Consequently, we stand in front of a situation in which **the workers themselves** have legitimized technocracy and they relinquish intellectual tasks that could enrich their own work.

It is in the presence of this inertia and cultural weight of regular practices that the use of psychosocial and management methods and tools become relevant in order to systematize and articulate analysis, discussion and group work activities; the goal is for them to gradually provide the structures that will facilitate leveraging behaviors compatible with the new participative and reflexive logic and allow the respective competences to become gradually internalized.

2. WORK ORGANIZATION

As regards work organizations, we shall consider several aspects that contribute to the value per se that work may have for the person who carries it out –that is, its intrinsic capability of being meaningful and motivating, not merely instrumental for those who carry it out (Hackman and Oldham, 1980; Appelbaum, 1997; Hodson, 2001). These aspects are: (1) the degree of autonomy it implies, that is, the number and range of **decisions** that it allows the worker to make; (2) the variety of **tasks** it includes, especially different tasks; (3) the opportunities it offers the worker to use and develop his/her **knowledge**; (4) the possibilities for **interaction** with co-workers that it allows; and (5) the existence of **feedback** about the work realized.

2.1. Autonomy.

First, we will discuss the degree of personal influence the worker has on specific matters of his/her everyday work: deciding the specific tasks s/he will carry out, which procedures or tools will be used and the pace with which s/he will work.

TABLE VI.4: AUTONOMY IN THE WORKPLACE, PER INDUSTRIAL SECTOR AND FIRM AREA (in % of workers)

MATTERS OF DECISION	DEGREE OF INFLUENCE	Total (%)	INDUSTRIAL SECTOR		FIRM AREA		
			Manu-ring (%)	Ser- (%)	Produc-tion (%)	Admi-nistra-tion (%)	Sales (%)
Specific tasks or work assignment to be performed	High	23.4	12.6	34.6	10.5	41.3	27.5
	Fair	38.4	32.6	44.4	31.2	39.9	48.6
	Little	22.0	30.5	13.3	31.6	11.2	18.1
	None	16.1	24.3	7.7	26.7	7.7	5.8
		100.0 (658)	100.0 (334)	100.0 (324)	100.0 (285)	100.0 (143)	100.0 (138)
			p = 0.000		p = 0.000		
Tools or procedures to be used in the job	High	32.5	27.4	37.8	28.2	38.9	33.6
	Fair	44.9	44.3	45.5	43.9	43.1	47.4
	Little	13.2	16.7	9.6	17.1	8.3	14.6
	None	9.4	11.6	7.1	10.8	9.7	4.4
		100.0 (659)	100.0 (336)	100.0 (323)	100.0 (287)	100.0 (144)	100.0 (137)
			p = 0.002		0.007		
Control of the work pace or speed	High	37.3	31.2	43.8	30.0	47.2	39.9
	Fair	40.4	39.8	41.0	39.7	40.3	43.5
	Little	12.4	15.4	9.3	16.7	5.6	11.6
	None	9.9	13.6	5.9	13.6	6.9	5.1
		100.0 (659)	100.0 (337)	100.0 (322)	100.0 (287)	100.0 (144)	100.0 (138)
			p = 0.000		p = 0.000		

Let's address a basic issue: deciding which specific tasks will be completed. In a classic Taylorist organization, all this would be previously defined. By means of studies on work methods –times and movements- engineers would already have pre-established everything the worker should do, leaving no room for the worker's

individual criteria or reflection. Taylor considered workers' autonomy as a mere source of risks and problems. In Chilean firms, most workers declare to have sufficient autonomy; however, 38.1% of the workers under study seem to be in such a taylorized or semi-taylorized condition. If we exclude supervisors, the figure climbs to 44.0%, and is markedly greater in production areas (58.3%). In contrast, as one would expect, greater autonomy is found in firm administrative areas. The sales and customer service areas show a special position, much closer to the administration. These areas do not have the history of standardization and formalization, which is more typical of production areas in manufacturing companies.

The influence is greater on the possibility of deciding the tools and procedures to be used and the pace and speed of work, although we still have a 22 to 23% - 25% if we exclude supervisors- with little or no decision-making power.

Other indicators ratify this situation. 29.4% of the total affirms: "The possibilities of using my initiative are blocked in my workplace," a number reaching 34.5% in the Production area.

A second way of addressing the workers' decision-making power is to analyze **how decision-making is distributed** among the different levels of the firm in matters that are relevant to them, and to what extent workers without hierarchical positions have access to decision-making.

Although the public discourse, including academic discourse, continually repeats that our companies have become decentralized and that "empowerment" has increased (cf. Calvo, 1998; Castillo et al., 1994), such claims are fairly general and, when talking about decentralization, the majority refers to what occurs only at executive levels. In this research project, we have tried to determine how this is expressed in the decision-making power that workers have nowadays. We

have considered five decision-making areas referred to everyday work, in which is feasible and reasonable that they decide by themselves and we have investigated who has effectively the main responsibility for those decisions.

Results reveal that a significant percentage of workers have little influence on matters that are relevant in **their daily activities** and about which the worker has some knowledge and experience. Thus, for example, 36.3% say that they have significant influence on their daily work schedule (this climbs 52.0% if we also include group decisions). However, only 5.7% of employees (which goes up to 16.0% if we also consider group decisions) say that they have the chance to decide about changes in the organization of their activities, whether productive or service related. In other words, if we consider these indicators as a measure of autonomy, the results are more negative than the ones recorded in the previous analysis. This may be because these questions are more objectively descriptive than the preceding ones, in which subjective perception of autonomy may have greater weight.

Another result deriving from this measurement is the fact that **the supervisor is still an important figure in decision-making**. With regard to the five decision-making matters considered, around 53% of the workers attributed the greatest influence to supervisors. Despite the loss of influence that supervisors have suffered and the reduction in hierarchical levels that have taken place last years, supervisors in Chilean firms seem to retain a certain importance that in other countries they have ceased to have. This is an eye-catching and noteworthy result.

If we compare by economic sector, worker autonomy is systematically greater in service-oriented firms. Here, decentralization in decision-making is greater than in the case of manufacturing firms. More direct contact with customers and their demands makes more evidently necessary that the employee establishing that

contact should be conferred greater decision-making power. In manufacturing companies, in contrast, workers are typically more isolated from the environment. Adjustments to the response to customers operate through other channels. This can be clearly appreciated if we compare by area. The greater concessions given to the workers' autonomy can be ascertained in the Sales and Customer Service area, while the lesser concessions can be found in the Production area.

Thus, for example, a branch executive of a Telecommunications firm, when referring to the sales team said: "They have been given more power (…), we want them to be more independent, more executive themselves (…). The firm gives you the set of internal regulations and tells you these are the regulations, and they need to learn to abide by them (…). This has enabled them to… We try to prevent them from leaving their workstations every five minutes to ask things; in other words, we want them to be as self-sufficient as possible. I believe they have learned that. In fact, they almost do not come here [to ask] anymore, or, when I go to see them, I receive fewer questions now than two or three months ago. Now, I believe that they also have developed a more mature attitude towards work. There are a lot of new people (…), but I think that if they know the scope of their decisions they can take risks, they know when to take the plunge" (SL21). In the same firm, a sales employee ratified this: "(…) when you ask [the supervisors], they tell you 'See for yourself, tell me, what would you do?'. That is the idea. So, if we had to ask about everything the customer says, we would have to [constantly] ask a supervisor. But that is not the idea; we are supposed to be executive and we have the capability of coming up with a solution for the customer. Now, when the problem is more complex, then it is necessary; it depends on the situation" (SL21).

Decentralization in service firms has yet another peculiarity: to a great extent, the group has greater decision-making power. That is, worker autonomy adopts both the individual and group modes.

If we consider the size of the firm, greater autonomy is repeatedly observed in medium-sized companies rather than in large companies. This may derive from different factors: lesser complexity, lesser rigidity and formalization, lesser structural inertia. These factors may make it easier to provide autonomy to the lower levels in medium-sized companies.

During the last decade, significant layoffs have affected middle management in Chilean firms, with the resulting hierarchical flattening. This has been showed by different studies (Castillo Maggi and Dini, 1994; Geller and Ramos, 1997) as well as by the results of this same research presented in previous chapters. Nevertheless, our data suggests that decentralization **has been partial**. Many decisions that could be decentralized are still made at higher levels. Medium rank employees, although in lesser numbers than before, still keep great decision-making power –in terms of work organization, quality, safety and human resource management-, while the workers' decision-making power is less than announced and than one would expect them to have.

Changes in autonomy and centralization

In reference to the five aspects of work about which we tried to establish the extent to which the workers themselves or the group could decide –organization of activities, daily work planning, task assignment, rotation and intensity of the work-, we additionally asked who made the decisions concerning this matter three years ago. From the comparison between who decided before and who decides now, we obtain the degree of variation, that is, the extent to which decentralization has increased or not. If, for example, a decision previously made by a supervisor is now made by the group or the worker himself, or previously by an executive and now by a supervisor, or previously by the group

and now the worker, this is considered an increase in decentralization, and vice versa. Results are shown in the table below:

TABLE VI.5: CHANGE OCCURRED IN DECISION-MAKING CENTRALIZATION (% of workers)

MATTERS OF DECISION	CHANGE IN DECISION-MAKING CENTRALIZATION			Total
	More decentraliza-tion (%)	Un-changed (%)	More centraliza-tion	
Changes in activity organization	9.8	86.1	4.2	100.0
Planning of the job daily work	13.8	82.8	3.4	100.0
Assignment of the tasks to be carried out at work	16.0	77.3	6.8	100.0
Rotation between different tasks	8.2	87.3	4.6	100.0
Work intensity	12.9	82.6	4.5	100.0

The most outstanding aspect is that the great majority of workers, around 80%, had experienced no change regarding decentralization of work-related decision-making. On the other hand, between 8% and 16% had already have experienced decentralization increase, a percentage that more than doubles those who had experienced the opposite situation. This suggests that changes are directed towards greater decentralization in matters concerning the work itself, although they progress in a slow and irregular way; the greater changes occurring in service-oriented firms.

On the other hand, managers are aware of the need for greater autonomy. This becomes an imperative, given the dynamic nature of the situations that take place at work. This is particularly clear in those areas with direct contact with customers, although the data suggest that decentralization is also produced in

manufacturing companies. This is a general tendency but it **develops slowly** and it tends to concentrate a significant proportion of the decisions in middle levels.

2.2. Variety of tasks

Variety is a second aspect that adds value to the work itself; it gives the work meaning and makes it motivating. The corresponding situation seems to be fairly positive: 81.8% of the workers recognize that the tasks they must perform are noticeably varied.

Nonetheless, mere task diversity is not a sufficient indicator of a meaningful and motivating work. These tasks also require a sufficient degree of complexity and articulation between them. Variety may mean a mere task overload that does not make the work attractive nor adds interest to it. We have two indicators that provide more information in this respect. On the one hand, 44.0% of the total number of workers claims that their work is “fairly simple and repetitive.” This already indicates that, in an important number of varied works, this is only a case of task overload. On the other hand, 33.1% of the workers (excluding supervisors) consider their work monotonous.

These two work dimensions, namely autonomy and variety, are also interrelated. Works tend to have at the same time little autonomy and little variety or plenty of both.

Changes in work variety.

While autonomy barely increases in lower levels, variety does present significant increase. When we asked, separately, about work variety before –three years ago- and now, and then compared both answers, it appeared that 52.1% has seen their work variety increased, while the reverse situation –change from a

varied work to a monotonous one- has been experienced by a much lesser number of workers, although that can not be neglected (13.7%).

We made the same comparison using another indicator –amount of different tasks or operations carried out. The results confirm the same tendency. Out of those whose tasks had little variety three years ago (they carried out only one or a few different operations), 53.7% carries out now more varied work, with several or many different operations. According to this indicator, 7.1% would have experienced the reverse tendency -reduction of variety.

In one of the manufacturing firms under study, a change in that perspective was just being implemented, through which maintenance tasks were added to the operator's work. A technical manager of the firm explained the procedure:

> "According to it […], coordinated by the maintenance department, […], the operators themselves are in charge of carrying out maintenance procedure on the machines. Why? Because they know where the little oil leak is, they know that the machine suddenly goes faster or slower, they know the problems the machine has, much more than a person who occasionally services the machine."

> "TPM is a maintenance system based on a different perspective than the traditional we provided our machines with. Its goal is to know the machine, that the operators themselves be responsible of its maintenance. In other words, the idea is not to have a maintenance department and a machine operator that reports, 'Hey, the machine is broken', and the service guys run to try and fix the machine".

> "The idea is for the operator to blend with his machine, to know it thoroughly. On the other hand, the maintenance department should be

another tool to help the operator in case of more complex problems, for example, a complex electrical failure; but the person controlling the machine and responsible for its maintenance should be the operator. This is basically it (...)".

In this case, we can see how the increase in task variety involves new responsibilities, greater use of knowledge and increased operator training. This is an example of variety that enriches the work, making it more comprehensive and motivating.

This increased task variety translates into greater employee **polyvalence**. The manager of a service-oriented firm said that this corresponded to the idea that everybody has to do of everything, and opposed it with the old rigidity in job descriptions. In one way or another, the managers of the firms under study coincided on this.

This greater polyvalence involves greater flexibility and permits operation with **a more adjusted staffing**. In some companies, this task increase has taken place simultaneously with staff reductions, and those who have remained have had to take over more tasks in order to replace laid-off employees. In other companies, when new organizational units are established, staffing is smaller than the previous standard for similar units from the beginning; under such conditions, then, employee polyvalence has allowed for equal effectiveness with reduced costs.[111] This was reported by an executive at a supermarket chain: "Before, a supermarket store was run with 100 employees and now it is run with 60 employees, because people are multifunctional, since processes have been automated…." (SL27).

[111] See what has been said in V.1 as to polyvalence, flexibility and adjusted staffing.

Greater task variety and worker polyvalence is also a measure that permits to face unplanned events. In some medium-sized firms, their contribution is seen as a means to allow for the replacement of employees that, for one reason or another, need to be absent from work, without affecting performance.

In many cases, this greater task variety enriches work and makes it more attractive or bearable to the workers' eyes. As the operators of a manufacturing plant noted, in this way "the day goes by quicker" (ML11). However, we need to remember the warning we made before: that variety can take different shapes, not all of them equally virtuous. On the one hand, it may mean nothing but greater load, a growing accumulation of tasks that add quantity but not complexity or interest to the work. Alternatively, on the other hand, variety may involve work with greater meaning, which becomes more comprehensive, including, for example, more responsibilities when dealing with a customer, or, like in the previous case of maintenance, including new knowledge and a more global approach to the task.

Of course, polyvalence is also associated to **internal rotation**. On the one hand, rotating workers between different positions facilitates their learning of different tasks, thereby developing competences that are more varied. On the other hand, having more polyvalent personnel facilitates their rotation in accordance with the firm's needs and contingencies.

Additionally, rotation, whether within the same section or between sections, has the advantage of generating a more global vision of the firm among the workers, and facilitates the fact that they may adopt this perspective in their actions and decisions. This is a generalized practice in top-notch Japanese firms, and constitutes an important way to spread employees' tacit knowledge throughout the organization (Nonaka & Takeuchi, 1995).

In the case of the workers under study, we have observed that they do experience some degree of rotation. 36.1% say that they habitually rotate between the different positions or workstations.

2.3. Possibilities for use of knowledge

The possibility for workers to apply what they already know and to acquire new knowledge is another aspect that helps to give greater intrinsic value to work. Greater complexity of the tasks to be performed, decentralization tendencies and the search for worker polyvalence have made the development of new competences and continual acquisition of new knowledge increasingly important. In fact, these aspects are strongly related with each other, except in the case of variety as overload or of a very superficial and transient autonomy.

In the studied cases, the scope of the possibilities for knowledge use is less wide than the development of variety and autonomy. One third of the workers (34.9%) do not find enough opportunities to make use of their knowledge. This situation is worse in the production area (39.9%) but is understandably more favorable among qualified workers, whom one would expect to have greater knowledge that could be applied in their workplace. On the other hand, another question allows finding out that 40.0% of the workers surveyed say that in the firm where they work they find no real opportunities to improve their abilities.

Just like in the other dimensions that we have previously reviewed, the situation is particularly unfavorable in the Production area.

Changes in the use of knowledge

In the surveyed workers' opinion, jobs are requiring greater knowledge and abilities. Approximately 70% perceive it that way, while just around 25% do not

see significant changes. Supervisors and qualified workers perceive in a greater extent such an increase in the amount of knowledge required in their workplace (in both cases, differences -between them and those workers who are not supervisors or qualified, respectively- are statistically significant).

Not only do we measure change regarding the use of knowledge with questions about the perception of change ("What changes do you see in…?"), but also with supplementary questions about the opportunities to use their knowledge that they had in their workplace three years ago, and, in another question, about the opportunities they have today. Crossing both questions lets us evaluate the change. Evolution takes place in the expected and desired direction. 41.8% of those who used to have few or no opportunities to use their knowledge now have sufficient (several or many) chances to do so. Only 11.6% experience the reverse situation, that is loss of opportunities.

It may be expected that requiring greater knowledge and more abilities in the workplace poses demands that have to do with greater **training**. In this respect, 69.2% of the employees had received some sort of training during the last three years. The areas that stand out are technical training (49.9%) and customer service training –in the case of service firms - (49.5%) and quality control –in the case of manufacturing firms- (39.2%).

It must be noted, however, that most of these training instances are of a very short duration. Average duration falls between 8 and 15 hours –depending on the area of training. In other words, they are brief courses, particularly those that refer to psychosocial or behavioral topics, such as leadership and teamwork. The longest training courses are referred to technical knowledge (for 30% of the workers who received training, it lasted more than 30 hours. Anyway, the majority of the workers who have received some training have participated in more than one of such activities. In fact, 37.5% has participated in three or more.

Thus, in response to the training facilities offered by the firm and their quality, contents and duration, only 38.2% of the employees declared to be satisfied. This would show that **progress in knowledge requirement is not being sufficiently supported by the training provided**.

2.4. Opportunities for interaction

A work allowing for sufficient interaction with co-workers is another aspect that gives work its meaning and psychosocial value. The possibility of interacting with other co-workers and developing positive social relationships is important for the cohesion and solidarity between workers as well as for achieving the desired commitment between the employees and their job. In other words, not only do these interactions serve the purpose of materializing actions for giving support between co-workers or for defending and improving their work conditions, but also they help the system to operate with less friction (Hodson, 2001).

Based on what we had heard from the workers, we had the impression that figures would reveal a negative situation. Nevertheless, a significant percentage of the workers (75.8%) believe that they have enough or a lot of interaction with their co-workers during their work, although, as in all the previous cases, opportunities are slimmer in Production (68.5%), where, in addition, 7.1% claim they have virtually no interaction. With regard to this last group, we would be in the presence of workers with **social conditions** very much deteriorated. Also, if these workers have little autonomy, variety and few opportunities to use and develop their knowledge at the workplace –as is the case for some of them-, we may well expect that the result will be negative for both the worker –in terms of work satisfaction- and the firm, in terms of loss of commitment and contribution to productivity from those workers.

Changes in social interaction

Although, if viewed as a static phenomenon we have considered the state of the possibilities for social interaction to be positive, when referring to **change trends** the picture is different and becomes worrisome. During the last few years, the opportunities for talking with co-workers during work have decreased. This has been the case for a significant percentage of workers (38.9%), which, in the case of Production areas reaches 49.5%. See next table.

TABLE VI.6: CHANGES IN THE OPPORTUNITIES FOR INTERACTION WITH OTHER CO-WORKERS ACCORDING TO FIRM INDUSTRIAL SECTOR AND SIZE, AND ROLE PERFORMED BY THE WORKER (% of workers)

		Total (%)	INDUSTRIAL SECTOR		SIZE		ROLE	
			Manu-fac-turing (%)	Ser-vices	Med-ium (%)	Large (%)	Super-visor (%)	Non su-pervisor (%)
CHANGE IN THE OPPORTUN-ITIES TO TALK WITH OTHER CO-WORKERS DURING WORK	More	13.6	13.8	13.5	13.8	13.5	25.5	11.2
	Unchan-ged	47.4	39.0	56.4	47.3	47.5	42.2	48.1
	Fewer	38.9	47.1	30.1	38.9	39.0	32.4	40.7
		100.0 (645)	100.0 (333)	100.0 (312)	100.0 (283)	100.0 (362)	100.0 (102)	100.0 (518)
			p = 0.000		p = 0.996		p = 0.001	

2.5. Existence of feedback

Receiving comments and evaluations about their work, about the efforts and results obtained, is something that provides workers with orientation and allows them to improve their performance and view things in a developmental perspective. Therefore, we have searched into the corresponding workers' perception.

This is an aspect where companies show great weakness. 52.1% of the workers say that they almost never receive comments saying how well or how badly they are doing. In this case, it is in the Administration area that this lack of information is greatest. In fact, 60.7% claim not to receive such feedback. In contrast, the Sales area is the one where feedback is most received.

In this sense, one typical and frequent weak area detected in the companies under study is **performance evaluation**: either it does not exist or it is practiced in a ritual way, or there are no systematic and reliable procedures for doing it. Other forms of feedback lie in the leadership conditions and management competences of supervisors and chiefs. In general, however, they have limited training in human resource management matters. Consequently, results are greatly dependent on personal characteristics and contingent factors.

2.6. Variation in productivity and work demand.

One last aspect we shall consider in relation to work refers to the pressures or demands on workers as to the results to be obtained and the effort required. This has to do with productivity, efficiency and work intensification.

A perception that is fairly common among executives and workers is that, in the last few years –at least in the last three, which is the period under study- productivity and product or service quality have increased. 61.1% of the workers say that the daily amount of production in their work has increased, in the case of manufacturing companies, or the amount of activities per unit of time (for example, the number of customers served per day), in the case of services. Similarly, 69.6% of workers believe that the amount of daily work is greater now than three years ago. On the other hand, 76.4% also believe that the demands in terms of the quality of the product or service have increased.

Such improvement in productivity and quality is partly associated with the development of greater or new knowledge and abilities. From the workers' point of view, this is the friendliest face. On the other hand, in many cases it has also involved work **intensification**. The following table shows that 66.7% of the workers consider that work is faster-paced now, and 70.5% that the concentration required is greater now. Also, although in a much lesser proportion, some believe that they require greater physical effort now. On the other hand, during this period, the increased effort has generally not been realized as overtime work. In most cases, overtime has remained the same (41.2%) or has simply been reduced (27.9%); as we will see later, the reason for this may be that, in previous years, overtime had become significantly widespread and high.

TABLE VI.7: CHANGE IN LABOR EFFORT DEMAND ACCORDING INDUSTRIAL SECTOR AND FIRM AREA (% of workers)

CHANGES OVER THE LAST 3-YEAR PERIOD IN:		Total (%)	INDUSTRIAL SECTOR		AREA		
			Manu-factu-ring (%)	Ser-vices (%)	Produc-tion (%)	Admi-nistrat-ion (%)	Sales (%)
WORK PACE OR INTENSITY	Higher	66.7	70.1	63.0	71.5	58.9	64.3
	Lower	4.4	4.2	4.5	3.6	7.8	3.1
		(642)	(331)	(311)	(281)	(141)	(129)
			p = 0.151		p = 0.076		
CONCENTRATI ON REQUIRED	Higher	70.5	73.2	67.5	73.9	65.0	70.0
	Lower	1.9	2.7	1.0	2.8	2.1	0.8
		(640)	(332)	(308)	(284)	(140)	(130)
			p = 0.040		p = 0.261		
PHYSICAL EFFORT	Higher	46.8	48.2	45.3	51.6	36.7	53.1
	Lower	14.1	17.4	10.6	16.8	15.1	9.2
		(645)	(334)	(311)	(285)	(139)	(130)
			p = 0.010		p = 0.008		
NUMBER OF OVERTIME HOURS REGULARLY WORKED	Higher	30.9	29.8	32.1	31.8	22.6	30.7
	Lower	27.9	31.3	24.2	31.8	32.8	21.3
		(621)	(319)	(302)	(274)	(137)	(127)
			p = 0.134		p = 0.084		

Note: In this table was excluded the alternative of those who said the situation has remained unchanged or encompassing no variation, as it corresponds to the remainder to sum up to 100%.

Although over the last 3-year overtime work has only risen for 30.9% of respondents, work hours are basically extensive. On average, workers sampled worked **50.7 hours per week**. As evidenced by aggregated data for all the

country, over the 90s, working hours have increased: among medium-sized and large companies, the average working hours in 1990 amounted to 49.0, whereas in 2000 this figure rose to as much as 50.6 (CASEN, 1990, 2000). In a worldwide comparison, according to data released by the ILO (1999), Chilean workers devote 2002 hours to work, as a consequence of which **Chile is among the countries having the most extensive working hours worldwide**. Moreover, according to The IMD World Competitiveness Yearbook's findings disclosed in 1996, Chile was the country working the longest hours all over the world. Even Chile's **legal** working hours (48 hours per week) place this country among the longest working days in Latin America. This situation should tend to become milder in the coming years, as an amendment to the Labor Law adopted in 2001 provides that regular working hours will be reduced from 48 to 45 per week as of January 2005. Nevertheless, no significant changes should be expected from such modification in the short run. Furthermore, currently there are many pressures from the entrepreneurial class towards the legislators, to deregulate the legal system for the working hours.

This would evidence that within the distinctive Chilean organizational configuration, which changes have been shaping, the work overload is a conspicuous feature, manifested in the form of extensive working hours and an intensified work pace.

Impact of the current work system on health.

The increase in work burden and intensity go hand in hand with other changes, previously indicated, like the increase in task variety and concentration Accordingly, work requirements are multiplied and workers have a more stressing time pressure. This situation has some positive consequences, such as higher intrinsic work content, yet it also involves risks, particularly for workers' health. Pressure might jeopardize health as it may translate into physical or

psychosomatic disorders. Looking forward to finding out on this particular aspect, we asked workers about the presence and frequency, if that was the case, of several likely symptoms or disorders, either during or after working hours.

We have taken symptoms as "present" whenever workers claim experience them regularly (almost everyday or several times a week). Conversely, symptoms have been rated as "absent" when workers claim they never, hardly ever or rarely suffer from them over the month (not over 4 days along such period).

Out of the nine conditions evaluated, only 35.7% of workers are free of all those symptoms. On the contrary, 36.5% experience three or more during the month and a distressed 27.9% suffer from four or more symptoms. These data give a picture of a deteriorated workers' health resulting from work-related factors, which is worrisome. By applying multiple regression analysis, taking a number of different characteristics of work situation as independent variables, one can corroborate that the most influencing factor, which is statistically significant, on these symptoms, aggregated into an index, is work intensification.[112]

The following table depicts the nine symptoms dealt with and the percentage of workers suffering from them.

[112] The dependent variable is constituted by an index integrating the nine indicators of symptom presence. The "work intensification" variable corresponds to another four indicators: increased work intensity, higher concentration required, greater physical effort and longer working hours. Controlled variables include area and supervisor role, which are considered as dummy variables.

TABLE VI.8: PRESENCE OF WORK-RELATED SYMPTOMS (% of workers saying they experience each symptom several times a week or everyday) AND HEALTH RISK VARIATION (% of workers)

SYMPTOMS SUFFERED BY WORKERS		Total (%)	INDUSTRIAL SECTOR		FIRM AREA		
			Manu-factu-ring (%)	Ser-vices (%)	Prod-uction (%)	Ad-min-istrat-ion (%)	Sales (%)
SYMPTOMS WHILE AT WORK	Headaches	23.4	21.8	25.2	23.5	24.3	28.3
	Stomachaches	12.2	10.7	13.8	11.8	13.2	13.2
	Extreme fatigue	31.1	30.1	32.1	33.9	25.1	33.4
SYMPTOMS AFTER WORKING HOURS	Stiff neck and backache	40.5	38.8	42.4	41.5	33.4	47.4
	Sore shoulders and arms	33.2	32.8	33.6	36.6	25.0	41.7
	Sore wrists and hands	25.4	25.9	24.9	28.6	22.0	23.0
	Sleep disorders caused by work concerns	24.8	25.0	24.7	27.6	17.5	28.3
	Physical fatigue after working hours	29.6	28.2	31.1	30.9	26.0	33.3
	Exhausted to the point of almost restricting personal activities to eating and sleeping	29.1	26.3	32.1	30.0	23.0	34.9
Work-related health risk variation	Higher	21.7	18.9	24.7	20.1	20.6	24.4
	Unchanged	43.8	36.3	52.0	32.9	53.7	52.8
	Lower	34.5	44.8	23.4	47.0	25.7	22.8
		100.0 (632)	100.0 (328)	100.0 (304)	100.0 (283)	100.0 (136)	100.0 (127)
			p = 0.000		p = 0.000		

We should highlight the prevalence of conditions beyond working hours, which occurs increasingly often in sales areas, where, for example, 47.4% of employees suffers from stiff neck and backache, most likely as a result of the stressful environment they are subject to. [113]

On the other hand, it may be assumed that this sort of ailments, when taken to the household context, result in a negative impact on individual and family private life and quality of life.

These symptoms stemming from increased workload and work intensity unveil a labor situation involving components detrimental to health for a large number of workers. Nevertheless, this would be offset –to a certain extent and at least for some workers- by a type of work that becomes more varied and autonomous, hence, more motivating.

2.7. Future changes

In spite of the insufficiencies detected in some aspects of work organization, a vast majority of workers (78.0%) usually feels unsatisfied with their daily work. In any case, for most of them, satisfaction factors are linked to aspects **not** related to work itself –the work environment as a whole, co-workers, security, etc- or value their jobs basically due to their instrumental value to achieve other goals, such as the resulting income or what they can afford with it. The very few jobs available nowadays due to the existing unemployment rate (roughly 9%) also turn the mere fact of having a job into a source of satisfaction. On the other hand, only

[113] A survey involving a sample of 430 trade employees found that 20.1% had taken benzodiazepines over the last year and about half of them admitted daily intake of those drugs (CORSPAS / CONSFECOVE, 1996). These high figures ratify the level of stress these kinds of workers are subject to.

11.1% of workers claim to be clearly unsatisfied, which is even evidenced by the daily annoyance going to work implies.

Consequently, leaving unsatisfied workers and those claiming merely instrumental reasons aside, we end up with 34.5% of all workers showing a definite **intrinsic motivation** for their jobs, due to the work itself, the activity they perform and the results attained.[114]

Thus, even though a significant level of satisfaction concerning work may be observed, 57.0% of respondents claim they would like their jobs to be different, which is basically mentioned by Production workers (61.3%) and by not skilled workers (62.4%).

Some of the changes regarded as desirable with regard to work organization and job design are included in the table below.

[114] These findings on satisfaction or dissatisfaction factors resulted from an open question.

TABLE VI.9: CHANGES LONGED FOR BY WORKERS REGARDING THEIR JOB (% of workers)

WORK DIMENSIONS		FUTURE CHANGE LONGED FOR			
			No change	Lower	
AUTONOMY	Freedom and independence enjoyed at job post	45.2	52.6	2.2	100.0 (644)
VARIETY	Variety of tasks performed	36.1	53.5	10.4	100.0 (637)
KNOW-LEDGE	Demands arising from the effort of learning new things	86.1	12.8	1.1	100.0 (639)
	Technical knowledge required for work	82.3	16.3	1.4	100.0 (633)
	Training offered by the firm	88.9	9.7	1.4	100.0 (637)
INTERAC-TION	Opportunities to chat with job associates at work	28.6	67.2	4.1	100.0 (632)
	Teamwork	63.5	36.0	0.5	100.0 (602)
WORKLOAD	Work pace and intensity	15.6	66.6	17.8	100.0 (640)
	Number of compensated overtime hours worked regularly	29.9	51.8	18.3	100.0 (562)
	Number of non-compensated overtime hours worked regularly	4.9	41.1	54.1	100.0 (453)

The most highlighted in this regard is the desire to have greater work-related knowledge use. Over 80% of respondents say they want a work demanding a more extensive knowledge and, as a necessary complement, more training opportunities.

This knowledge valuation is worth further discussion. On the one hand, one could think this desire is related to employees' interest for achieving better adaptation conditions to growing dynamism and complexity of the firm and work itself. Accordingly, it would be consistent with the notion of "**employability**", that is to say, the ability to become more employable. However, on the other, it can also evidence knowledge valuation for the job enrichment and for the sake of feeling satisfaction derived from it.

The second place of importance, in changes desired, is shared by two aspects – teamwork and greater freedom and independence- both of which refer to greater labor self-governance and decentralization. As mentioned previously, regardless of the progress shown by these aspects, such advance has occurred at a very slow pace, rather than at the same speed that changes in work environment.

In third place, we have the desire to work less **non-compensated** overtime. On the other hand, almost one third of workers claim to be willing to work more compensated overtime. That is to say, they are interested on working longer hours, as a consequence of the higher income such move involves, which basically stems from the inadequate level of basic compensation many of these workers are subject to; however they wish to avoid working overtime while receiving no compensation whatsoever for such extra work.

* * * * *

In summary, it may be ascertained that approximately two thirds of medium-sized and large firm workers hold jobs with intrinsic value. That is, a job in which workers have a sufficient level of control over what they do, encompassing a variety of different tasks that make work appealing and meaningful and which is also demanding and allows workers to put their knowledge into practice. Further, while performing their jobs, they are able to interact with their co-workers, which positively adds to the labor climate.

The negative counterpart is that, even in the relatively privileged sector of workers that have been investigated, there is a fairly high number of them –the remainder third- whose work is poor per se: uninteresting, tedious, neither encouraging nor allowing worker's development. Strictly speaking, a "precarious" work. This term has usually been used to characterize jobs according their employment conditions; in that sense, a precarious job will be one subject to no employment contract, bearing unstable conditions, reduced legal protection, no social security, dismal compensations, etc. (Rodgers, 1989). Here we are addressing **another side of precariousness**, which refers to the work in itself, to the labor activity per se, to the activity workers devote most of their conscious life to.

Other relevant findings are associated with changes experienced. As we have observed, the most conspicuous change is the one leading to introduce more varied activities to work. This implies the risk, as we stressed previously, that such a variety could result in further workload without enhancing complexity or quality. In addition, the rate at which knowledge is used and the opportunities of proper training are lower and not satisfactory, regardless of how much this situation is improving. Autonomy and decentralization of workers are also developing at an extremely slow pace. An excessively high number of decisions are concentrated at supervisors' levels. There is even a meaningful number of cases in which decisions formerly made by workers currently are in the hands of supervisors.

Lastly, an important negative counterpart of the favorable findings concerning work itself is the intensification of work and its detrimental effects on workers' health and quality of life, which affect a great number of them.

3. FIRM'S INSTITUTIONAL SIDE

The normative institutionalization found within companies is a complex matter. We have chosen three aspects of particular significance for addressing this field of the corporate world. First, we will address the reward distribution; an aspect strongly related to the **sense of justice** that growth within the firm. The second issue we will be taking into consideration is **work relation stability**, which reveals entrepreneurs' vision about employees and influences the relationship between these two players. The third aspect, refers to **workers' actions vis-à-vis the changes** implemented in work organization, as well as the respective actions and reactions from the top management.

3.1. Workers' rewards

3.1.1. Remunerations

44.9% of those workers subject to study have incomes lower than CLP 200,000 and 41.7% make between CLP 200,000 and CLP 500,000 per month. The remuneration structure of these workers, showed in the following table, is consistent with that of firms with the same size and economic sector along the country (cf. ENCLA 99).

TABLE VI.10: REMUNERATIONS PAID, ACCORDING INDUSTRIAL SECTOR AND FIRM SIZE (% of workers)

MONTHLY INCOME INCLUDING OVERTIME	Total	INDUSTRIAL SECTOR			
		Manu-factur-ing (%)	Ser-vices (%)	Medium (%)	Large (%)
Less than CLP 150,000	19.2	26.8	11.2	9.2	27.2
From CLP 151,000 to CLP 200,000	25.7	28.5	22.7	26.6	25.0
From CLP 201,000 to CLP 300,000	22.8	24.1	21.5	27.0	19.6
From CLP 301,000 to CLP 500,000	18.9	16.5	21.5	22.2	16.3
Over CLP 500,000	13.3	4.1	23.1	15.0	12.0
	100.0 (661)	100.0 (340)	100.0 (321)	100.0 (293)	100.0 (368)
		p = 0.000		p = 0.000	

Note: (1 CLP = 689 USD, in 2002)

Contrary to what one would think, the highest remunerations are not found among large companies; furthermore, one fourth of the employees of these firms (27.2%) are in the lowest wage level. On the other hand and as expected, income is strongly related to education and seniority.

Aside from fixed remuneration amounts, 49.6% of workers said to be paid some kind of bonus or monetary incentive. The following table shows bonus distribution.

TABLE VI.11: NUMBER OF ECONOMIC INCENTIVES RECEIVED, ACCORDING FIRM'S INDUSTRIAL SECTOR AND WORKER'S QUALIFICATIONS (% of workers)

INCENTIVES PAID (in excess of salary)	Total	INDUSTRIAL SECTOR		QUALIFICATIONS	
		Manu-facturi-ng (%)	Ser-vices (%)	(%)	Unskilled (%)
	50.4	40.8	58.7	49.2	52.3
One	40.6	48.1	33.1	40.8	40.2
Two or three	9.0	11.1	8.1	10.0	7.5
	100.0 (611)	100.0 (340)	100.0 (321)	100.0 (293)	100.0 (368)
		p = 0.000		p = 0.515	

The results of ENCLA 99, a survey applied by the Labor Bureau to a country-wide sample of firms, showed that the number of companies paying incentives had experienced sound growth over a one-year period as they rose from 48% of firms paying them in 1998 to as much as 60.1% in 1999. Our data, however, shows less pervasiveness of such incentives. For one thing, bonuses were paid in no more than 40% of the firms studied (see Table V.14); on the other hand, as to coverage, our research confirms that the regular practice within a firm is granting those bonuses to only a portion of the personnel, moreover in some of them, incentives were paid to a handful of workers. Strictly speaking, although individual incentives have experienced sound growth, they still benefit a small proportion of workers that is only a minority of them.

According to our data, the variable component of income that shows the greatest scope of reach among workers, and particularly among large corporations, is the incentive associated with **overall firm's results** (**collective bonus**), that is to say, an incentive making no difference based on productivity or results achieved by particular individuals or groups of workers. 22.7% of workers are awarded this bonus. Secondly, showing very little difference among them, are incentives

related to individual and group results, which are paid to 15.5% and 14.3% of workers, respectively.

It is worth noting that despite the strategic relevance of **quality**, of which entrepreneurs and managers are well aware, quality bonuses are not consistently awarded. Barely 2.2% of employees claim to have been paid a quality bonus. Taking into consideration that this aspect bears major significance, it can be ascertained that the compensation structure is not well aligned with the corresponding strategic objectives sought by companies.

Further, firms do not seem to offer a wide range of economic incentives one single employee may receive. Half of the workers are paid no incentives at all and from the 50% that does, only very few are paid more than one. Only 9.0% of workers have been favored by more than one incentive.

Contrary to what could be expected, skilled workers are not awarded greater incentives than unskilled ones; neither do they show significant differences regarding the amount of the incentives awarded.

3.1.2. Equity and effectiveness of the compensation structure.

A corporate economic compensation structure –particularly the variable component- is ideally aimed at rewarding and encouraging the level of performance and competences both required and appraised by the organization. The ultimate goal is causing workers' behavior to be oriented towards the efficiency, productiveness and quality pursued by the firm (Lawler, 1990). As a result, in addition to corporate benefits, employees' satisfaction would be achieved.

For a compensation structure, oriented to the previous aims, to be efficient, workers necessarily have to perceive those connections between their behavior, competences and performance and the bonus that could award them. If those perceptual connections fail, workers will tend to become discouraged regarding corporate goals, to perceive inequality and feel dissatisfied (Kanfer, 1990).

We will attend the workers' perspective over their firm's compensation structure based on three aspects:

(a) Their perception that the remuneration they are paid adequately compensates for their skills and training. In other words, this is the **competences-to-payment adjustment**.

(b) Their perception of **equity with regard to others' compensations**; that is, their comparative judgment s/he is properly compensated as compared to other workers who perform equal or similar activities, both within and outside the firm.

(c) Their appreciation of **consistency between their compensation and the production improvements** the firm has experienced.

The following table features workers' responses on this matter.

TABLE VI.12: SATISFACTION WITH ECONOMIC COMPENSATION, PER INDUSTRIAL SECTOR AND FIRM AREA (% of workers)

ASPECTS CONSIDERED WHEN EVALUATING WORKER'S SATISFACTION		Total (%)	INDUSTRIAL SECTOR				
			Manu-fac-turing (%)	Vices (%)	Prod-uction (%)	Ad-min-istrat-ion (%)	Sales (%)
Compensation is consistent with worker's qualifications and training	**Satisfied**	27.5	19.3	35.9	19.5	32.4	33.1
	Dissatisfied	72.5	80.7	64.1	80.5	67.6	66.9
		100.0 (659)	100.0 (336)	100.0 (323)	100.0 (287)	100.0 (148)	100.0 (133)
			p = 0.000		p = 0.000		
Compensation is consistent with that of other workers performing similar tasks	**Satisfied**	28.2	21.7	34.9	21.4	33.8	31.7
	Dissatisfied, because others in the firm are paid higher compensations	56.9	62.5	51.2	64.5	51.4	52.5
	Dissatisfied, because other firms' employees are paid more	24.2	25.2	23.2	24.5	28.4	20.9
		(*) (673)	(341)	(332)	(290)	(148)	(139)
			p = 0.000		p = 0.011		
is consistent with productivity or service improvements	**Satisfied**	27.5	20.8	34.9	19.5	35.0	32.0
	Dissatisfied	72.5	79.2	65.1	80.5	65.0	68.0
		100.0 (640)	100.0 (336)	100.0 (304)	100.0 (287)	100.0 (137)	100.0 (128)
			p = 0.000		p = 0.000		

(*) Note: The columns related to compensation equity do not add up to 100.0 because respondents were allowed to simultaneously choose dissatisfaction due to internal inequity and external inequity.

In a first and overall review of these data and taking the three aspects simultaneously into consideration (which is not specified in the foregoing table), one can note that there is large dissatisfaction among workers regarding the compensations they are paid. Only 16.5% of the workers sampled claims to be satisfied with regard to all the three dimensions considered.

Now, when discussing every aspect separately, we can observe that 72.5% think that the amount they are paid **does not give account of the personal skills** they have acquired over time. This is particularly stressed in Production areas of manufacturing companies (80.5%).

71.8% perceive compensation inequalities in the payments and reckons that compensations are **not consistent with the tasks they perform**. This perception and feeling of inequity is basically related to the firm's internal situation, rather than to comparative compensations paid at other companies. Once again, dissatisfaction is outlined in Production areas, where this feeling is shared by skilled and non-skilled workers, and even supervisors.

Finally, 72.5% believe that their compensations are **not representative of the productivity improvements** occurred within the firm, a perception that is dramatically stressed in Production areas of manufacturing companies.

Dissatisfaction tends to drop among those workers having the highest compensations, nevertheless, there are always a high percentage of dissatisfied workers among those layers earning less than CLP 500,000 per month (which is a high level, in the Chilean context).

With the purpose of establishing the importance this compensation-related perception of equity or inequity bears for workers, we carried out several multiple regression analyses, whereby we reviewed the influence of this perception on global work satisfaction.

In the different models considered, both perception of compensation-skills consistency and perception of equity (internal or external) arise as significant statistical factors influencing on labor satisfaction. Both equity appreciations even appear to be of greater significance than the amount earned itself, which is worth underscoring.

3.1.3. Non-economic rewards

The economic compensation weaknesses referred to above, which are partly related to design and implementation complexity, are neither sufficiently offset by **non-economic** compensations.

Only 26.1% of the workers sampled admit they have been awarded fairly interesting non-economic incentives from the firm. The table below shows data derived from classifying spontaneous responses to an open question and highlights the type of compensation workers value.

TABLE VI.13: TYPES OF NON-ECONOMIC COMPENSATIONS RECEIVED BY WORKERS (% of workers)

NON-ECONOMIC REWARDS WORKERS CONSIDER IMPORTANT	
	41.8
Acknowledgement	36.1
Promotion	8.2
Support	5.7
Other	8.2
	100.0 (122)

Note: The total figure only encompasses those who have received non-economic rewards.

As it may be observed, training being on the first place comes to confirm the desire of future changes claimed by workers. Development of new knowledge and skills, as well as counting on the possibility to put such knowledge into practice is highly valued aspects. On the one hand, training provides workers with tools to better face and adapt to future; on the other, it increases the inherent interest of the work they perform at present.

Concerning the second most valued incentive, the acknowledgement workers receive for their performance, it may be highlighted that although workers value very much this aspect, its occurrence is low within companies. Even though higher delivery of these rewards does not face the classical cost hurdles, acknowledgement-based incentives are in fact hindered by traditional managerial styles and poorly sophisticated human resources management.

In summary, the resulting overview shows **significant inadequacy of the reward system**. Accordingly, **the latter could be seen as not aligned with the corporate changes under way**, as it would not be adequately helping corporate objectives to be connected with workers' performance. Workers evidence

dissatisfaction and inequity perception, which may result in deteriorated corporate climate and weakened motivation and commitment.

3.2. Employment stability

Jobs influences workers' lives in many ways. Besides being a means to obtain the income needed for their expenses, work may affect employees' health, as we have already seen, and influence their psychological condition. Here we will address the perception regarding employment stability, which is an outstanding component of the personal sense of life certainty.

The last few years' economic crisis has accentuated the use of layoffs as an adaptive mechanism by companies (ENCLA 99). Most workers surveyed have undergone the experience of seeing workmates being laid off. 64% of them state that many or a significant amount of layoffs have occurred in their firm.

While layoffs affect them and generate uncertainty, workers, in a significant proportion (64.3%), consider them as justified, at least if they are not excessively widespread; whenever many people have been laid off, the "approval" rate drops to 41.0%.

TABLE VI.14: LAYOFF JUSTIFICATION ACCORDING THEIR MAGNITUDE IN THE FIRM, AS PERCEIVED BY WORKERS (% of workers)

		NUMBER OF LAYOFFS IN THE FIRM		
		Very few (%)	Quite a few (%)	Many (%)
WORKERS' OPINION ON LAYOFF JUSTIFICATION	Well justified	17.1	3.0	2.5
	Justified	68.7	57.6	38.5
	Unjustified	14.2	36.4	42.2
	Totally unjustified	0	3.0	16.8
		100.0 (211)	100.0 (236)	100.0 (161)
		p = 0.000		

If we analyze these results based on the firm size, the proportion of workers who justify the layoffs is higher in the medium-sized firms and in the Sales and Management areas. An explanation for this would be that the external pressures and the imperatives leading to such measures are more visible for the employees in these kinds of firms.

In order to further analyze workers' opinion regarding this issue, we studied the managers' and entrepreneurs' commitment and concern for the workers, as perceived by the latter. So, workers were asked to assume a situation where a strong decrease in the firm's income occurred and whether they considered that those leading the firm would try to avoid layoff at all costs or not.

41.4% of them replied affirmatively. The confidence on the firm –on its commitment to its workers– varies according to various factors. The confidence level is higher in the medium-sized (49.5%) than in the large (34.8%) firms. It is stronger among the most senior personnel (53.7%) than among the newer

employees[115] (38.1%). It is also higher among supervisors (53.0%) than in the rest of the employees (39.5%).

Based on the above, what happens with the workers' certainty feeling? 45.1% of them feel **more uncertainty** now than three years ago, being higher in the large firms. This higher uncertainty sensation affects workers regardless of their educational level; so, 56.7% of those with primary to incomplete high school, and 51.4% of those with a university degree experience it (difference that is not statistically significant).

In this regard, it must be added that the increasingly higher uncertainty remarkably worries workers (84.3% of them state that they are very or quite worried), regardless if they are qualified or non-qualified workers, in both medium and large firms.

Unemployment among these firms, on the other hand, is not just something that, in the workers' perception, happens to others; it is increasingly becoming a common experience. Among all those surveyed, 34.5% had been unemployed at least once in the last 10 years, and almost half of them (45.8%) had been unemployed for over six months in total, i.e., for a period long enough to feel its effects.

A group of U.S. researchers (Cappelli et al. 1997), based on their studies on the changes occurred with employment in their country, argue that a **breach in the implicit social contract** has taken place. Traditionally, this social contract had considered, over the last decades, the employment relationship as guaranteeing a significant extent job stability. Within this relationship pattern, market contingencies were absorbed by the firm, thus protecting workers from them.

[115] With less than four years in the firm.

Now, in contrast, workers have been left directly exposed to the market forces. The risk of layoff becomes high and permanent. Staff downsizing stopped being a measure firms resort to when facing special crisis conditions and become a tool to become flexible and adjustable to the market conditions, used frequently and affecting all kinds of workers. This change implies a **weakening of the reciprocal commitments** between employers and workers and means the prevalence of relationships that become increasingly more instrumental, relinquishing the cultural weaving that used to dress them. (Although, some of the old-styled employment stability and conditions remain in force for a sector of "core" workers).

How much of this has taken place in Chile? At a first glance, the situation or trend seems to be very similar.

A significant percentage of workers, as we have seen, consider frequent layoffs as legitimate. Currently, their awareness regarding the risks the companies they work for has become commonplace. Bankruptcy does not represent a distant or faraway reality. On the other hand, they are confident that entrepreneurs will try to avoid layoffs or, at least, they will find a way to control or space them over time.

Notwithstanding, whenever around half of the youngest workers have experienced unemployment, whenever 60% of the workers have seen significant layoffs in the firm they work for, unavoidably this situation will generate some psychosocial and cultural changes. Those experiences inevitably lead to an employment relationship perceived to be more precarious, to a more instrumental definition of the relationship with the firm and to generate doubts about the old commitments. The above is in concordance with the results from the last UNDP's study, which, for example, found that six out of every 10 youngsters stated that a job is, above all, a means to make money (UNDP, 2002: 96).

This change, along with similar ones inside the organizations, has significantly influenced on the rise of ideas such as "**employment citizenship**". This concept, established by the ILO in 1998, seeks precisely to highlight the social and normative character of the relationship between the actors on the firm field (Morris, 2000; Montero and Morris, 2001). When such relationship becomes instrumental, precarious and contingent, and when it loses its former ethical and socio-cultural load **the commitments and the reciprocal rights and obligations** are sought to be **reconsidered** by means of the use of the "employment citizenship" notion. The reinforcement and strengthening of the firm as a socially regulated and framed public space –a *sui generis* one- are sought. The above is an attempt to reconsider what seems to be at stake.

It is worth noting the value of such an approach, in view of the changes taking place in the firm and in employment. The result of the above interpretive efforts, however, is not very clear. Morris (2002) expresses his doubts about the implementation of these concepts, given the prevailing entrepreneurial, working and union practices. In his research, as well as in the Opazo and Gonzalez (2002)'s, such ideas do not appear to have any solid empirical grounds among the actors, despite their "reasonability". The core of the socio-normative elements in the Chilean firm is provided by the labor law regulations. The rest rely on social agreements, which do not seem to assume a richness, strength and consistency so as to make them substantial for the working life in most companies.

Regarding the above, our study contributes with several indicators reflecting a **weakened social and normative framework**, at least in a significant number of companies. Although the firms investigated represent a universe where more favorable economic conditions might be present, a vision of scanty common achievements and cooperative construction by the organization's members is observed. Some indicators supporting this appraisal are the following:

- Less than half (48.3%) of the workers say that “firm’s executives maintain a cooperative relationship with workers”.

- 45.0% of the workers say that “there is a prevailing lack of trust between executives and employees”.

- 54.4% say that “entrepreneurs do not worry about the situation workers go through”.

- Only 45.8% say that “if entrepreneurs succeed, all us succeed”.

- 73.4% say that “as employees keep earning the same, entrepreneurs become rich”.

This negative social relationship situation, especially noticeable among manufacturing companies, reflects a worrying situation, which may be foreseen as a hindering factor for the cooperative improvement of firms in the future.

3.3. Workers’ actions when facing changes in the firm.

As mentioned, a gradual change has taken place in the employment relationship, and the relationships between workers and entrepreneurs have become more **instrumental**. Organizational changes occurred in the last few years have taken place within this framework, without considering, in most cases, workers’ participation. So, 70.3% say that “firm managers decide changes at work without asking the employees affected by the changes”.

3.3.1. Demonstrations.

While worker's assessment of work changes is, in general, positive (67.8% sees it that way); those changes have had various negative effects, several of which we have mentioned above (increased workloads, health problems, uncertainty, etc.).

In connection with those changes, they perceive as negative, workers have not remained inactive. There have been complaints and protest demonstrations. Workers have expressed their voice. 22.5% of workers claim to have publicly manifested their opinion against the changes. Chilean companies, however, do not constitute a suitable place for disagreeing voices. Out of those who consider negative changes were taking place and, despite this, did not express any opinion at any public instance, half of them (50.8%) say it was due to the fear of being dismissed or other reprisals. One fourth of them (27.7%) say that they expressed no opinion because the workers' opinion is not taken into account in the firm. It must be noted that all of the above are spontaneous answers to an open question, classified afterwards. Both answers reflect the companies' shortcomings as social spaces that might enable the argumentative encounter among its members. These answers show the weaknesses in the social and normative articulation within the firm, which we referred to above, and which is so necessary for the development of a communicative rationalization, and not a merely instrumental, within the firm or, in other words, for the firm's internal democratization.

Such fears and obstacles encourage workers to deploy other ways to complain and demonstrate. 36.4% of the workers say that collective demonstrations, such as union complaints, slow work and strikes have taken place in their companies, although the main claim has been economic. As seen in the table below, the

largest protests have occurred at manufacturing companies, where the participation instances and internal democratization are also lower.

TABLE VI.15: CRITICISM AND DEMONSTRATIONS BY WORKERS AGAINST ORGANIZATIONAL CHANGES (% of workers)

REGARDING CHANGES IN WORK AND PRODUCTION CHANGES		(%)	INDUSTRIAL SECTOR		SIZE	
			Manu-factur-ing (%)	Ser-vices	Medium (%)	Large
Workers who have publicly expressed their opinion against negative changes		22.5	24.1	21.0	25.0	20.7
Protests due to negative changes		36.4	52.2	19.0	28.8	42.2
Demonstra-tions undertaken	**Strikes**	9.2	12.6	5.6	4.3	12.9
	Slow work	7.5	12.0	2.8	9.7	5.9
	Labor union complaints	18.3	25.6	10.4	13.2	22.1

3.3.2. Labor union actions

A traditional channel for workers' opinion and complaints is the union. Its coverage, however, is very limited. Out of all the workers surveyed, only 56.5% worked in companies where a labor union existed.[116] An in those cases where there was one, only 57.3% claimed to be joined to the union. In other words, only

[116] Labor unions are concentrated into the medium-sized and large companies. As shown by ENCLA 99, 56.8% of the large companies and 38.4% of the medium-sized ones, based on a nationwide, all industrial sector survey, has a union. In contrast, only 9.7% of the small companies and 4.2% of the micro-companies reports to have a union.

around one third of the workers were affiliated, even with a passive participation, to this collective means of organization and action.[117]

TABLE VI.16: LABOR UNIONS: EXISTENCE, MEMBERSHIP AND STRENGTH, BASED ON INDUSTRIAL SECTOR AND SIZE OF THE FIRM (% of workers)

	Total (%)	INDUSTRIAL SECTOR		SIZE	
		Manu-factur-ng (%)	Ser-vices (%)	Medium (%)	Large (%)
Existence of union in the firm	56.5	76.5	35.8	32.4	75.7
Membership (when there is a union)	57.3	62.9	45.7	52.5	58.9
Appraisal of the union strength (when there is a union)	45.8	40.9	57.7	37.1	49.8

Nationwide, the labor union coverage is reduced and the return to democracy had an invigorating effect only in the first years; later on, union membership declined again. On the other hand, the number of strikes during collective bargaining is low, which shows a **low combative level**, which is associated to the **unions' weakness**.[118] In the table below, this evolution is shown.

[117] In a survey performed on labor union leaders, the main reason for workers not joining the union was fear; fear of being harmed by their union membership. The above is mentioned in 40.2% of the medium-sized companies and 34.5% of the large ones (Espinosa, 1996: 51, 52).
[118] Cf. Espinoza (1996: 65, 66) on the non-existence of confrontation strategies by the workers.

TABLE VI.17: UNION MEMBERSHIP (% with reference to employed labor force) and STRIKES (absolute figures)

YEAR	UNION MEMBERSHIP RATIO (with regard to the employed labor force)	STRIKES		
			Illegal	Total
1980	-	52	0	52
1981	-	82	0	82
1982	-	11	0	11
1983	-	39	1	40
1984	-	39	0	39
1985	-	40	0	40
1986	14.2	39	0	39
1987	15.1	105	7	112
1988	15,2	92	16	108
1989	16.8	112	21	133
1990	19.8	168	96	264
1991	22.4	204	43	247
1992	22.0	242	46	288
1993	19.7	203	65	268
1994	19.3	189	129	318
1995	18.3	163	102	265
1996	17.7	181	73	254
1997	16.3	183	92	275
1998	16.3	120	96	216
1999	15.3	91	123	214
2000	15.9	123	94	217
2001	15.7	95	94	189

Source: Facea, Universidad Católica (data on strikes); National Labor Bureau (Dirección del Trabajo) (union membership).

The hostility many entrepreneurs express against labor unions joins this scenario of scanty union involvement and weakness. In a survey by the Labor Bureau (Dirección del Trabajo, 1996) to union leaders from 300 firms in the Metropolitan Region, leaders reported hostile attitudes from employers at 32.1% of the medium-sized firms and at 34.5% of the large ones.[119] Hence, workers do not have the organizational strength or the legal or institutional support that enable them to offset the power of entrepreneurs and managers in connection with the organizational changes and their implementation inside the companies.

[119] In Temas Laborales, N° 4, September 1996.

As far as organizational and work changes are concerned, unions at the firms under study showed to be useful to channel information to the workers and to undertake discussions with the top management in order to avoid or reduce the detrimental effects of the changes. In practice, however, only a minority of cases (23.3%) had been effective in these issues, according to workers surveyed. Despite the above, this is a tool workers do not give up. A wide majority of them (71.0%) states that labor unions should be more involved in the development of changes in work organization. This is especially remarked in manufacturing firms, which are just those where the union effectiveness is lower. In other words, workers continue to trust in unions and expect solutions from them, despite their weakness; likely, because they do not foresee any better alternatives, or because they simply see no other at all.

4. CONCLUSIONS ON THE WORKERS' EXPERIENCE WHEN FACED WITH CHANGES IN THE FIRM

Work itself, reflexivity developed around work, and the social and normative structure inside the firm, are the three focuses our attention has been drawn to. The picture presented is quite favorable for workers as far as work itself is concerned, but it is weak regarding reflexivity and social and normative context, which represents an obstacle for the development of the firm and for a constructive interaction between entrepreneurs, corporate officers and workers. We will finally address some of the most remarkable results of this chapter.

4.1. Work in itself

Work characteristics condition the richness of meaning it will acquire for the worker who performs it, and his/her subsequent working motivation. The general situation in this area is relatively positive. In the medium-sized and large

companies, whose workers we have studied, work has variety, independence, and it involves the possibility to use knowledge, and experience social interaction, which give it a significant **value per se**, besides its significance as a means to earn a living. The trend also goes in this direction, although it moves forward **slowly**. The above situation, however, includes a series of shades and also comprises some negative aspects.

The **variety** of tasks stands out as the most positive aspect. In general, a favorable appraisal prevails about it, although, for some people, it is associated to a work overload. In fact, regarding this positive evaluation, in various multiple regression models integrating work features and conditions and, several control variables, work variety is the variable that influences most on work satisfaction, considered the latter as dependent variable.

An also significant percentage of workers declare having enough opportunities to **use and develop their knowledge** at work; also, training keeps a wide coverage, although its duration is short, which might involve, in many cases, a limited depth. Because of the latter, most workers claim to be **unsatisfied with the training received**. Moreover, it is worth noting that the future change more aspired by workers refers to the use of knowledge: more opportunities to learn and use knowledge, and receive more training. The above reflects a significant valuation of knowledge by workers, either due to instrumental reasons, in order to increase their employability, or to the intrinsic contribution knowledge makes to work richness itself.

Regarding the opportunities for **social interaction** with workmates, workers consider them to be enough. However, a widespread, **decreasing trend** regarding such opportunities is observed. If we consider that sociability within the firm is significant for the organizational climate and facilitates the takeoff of practices, such as work teams and technical participation by workers, it can be

inferred that this trend towards the reduction of social interactions may pose future dangers for the harmonic development of the firm. On the other hand, this trend may also be interpreted as another manifestation of the "**sociability retraction**" and the weakening of a collective sense, observed in the Chilean society as a whole (UNDP, 1998: 147), and that UNDP claimed to be critical symptoms leading to a lower associativeness and reduced willingness to collective actions. In other words, it would be part of a larger problem.

Companies have decentralized their decision making processes and this has led to significantly increased powers in the hands of **supervisors**, whereas the lower hierarchical levels have received very little power. Decision-making powers granted to workers has not matched the above widespread decentralization trend. This is a feature that seems to be peculiar to the change process in the Chilean firms, and it concords with a culture of verticality, where a clear distance exists between those making decisions and those who do not. The above involves social and cultural representations and values that maintain differences and separations well beyond what would be rationally convenient for the firm. Even among workers themselves, the perception regarding this issue is quite positive, which might be the result of their lack of comparison points and reduced expectations for something different. As they have had no experiences having authority to make decisions, they do not have references to perceive its lack. A certain social factual legitimization of the current state, considered to be "natural", also has some influence on it. Despite this, around half of the workers claim to aspire to a higher freedom and independence level in their positions in the long term, which may be foreseen as a potential for future change.

While the general situation, as far the above aspects is concerned, seems to be auspicious, at the same time there is a group made up of between one fourth and one third of the workers who show a notorious degree of "**precariousness" in their work**, as to lack of autonomy, monotony and lack of work variety and social

interaction. This is a notion of precariousness that joins others, which have been further studied concerning to the contractual and salary conditions, and similar extrinsic factors.

The lack of feedback on performance is widespread inside the firms. This represents a deficit that seems to be associated with the difficulties to address reflexivity, which the insufficient technological advance in the human resources management systems influences on. In fact, Human Resources is the area with the lowest development level in the firms (cf. Geller & Ramos, 1997; Montero, 1997; Alvarez and Tovar, 2000). Although there would be an increase in assertiveness and criticism capacity among employees (Calvo, 1998), this would not surpass the existing cultural and institutional inertias in matters such as organizational feedback and reflexivity.

Changes occurred over the last few years in work organization have led to productivity and quality improvements. They are also associated with increases in **work intensity**, which has a **high cost for the workers' health**. So, more than 60% of workers experienced some kind of psychosomatic ailment, and around one third was seriously affected, resulting in a deterioration of their living conditions, both at work and in their private life.

4.2. Participation and reflexivity.

Only between one fourth and one third of workers have been involved in collective practices of reflexivity and improvement of work and organization. Those activities which might have such purposes are characterized, in most cases, by their non-structural, non-systematic nature, being poorly organized and with a vertical approach; thus, replicating cultural patterns that maintain a paternalistic imprint. Moreover, they generally do not allow for a suitable interactivity, thus missing the synergy that might arise from it.

Many of the meetings and group activities undertaken have positive effects on organizational communications, but they do not articulate reflexivity processes. It might be asked if this represents a stage firms would need to go through before developing properly reflexive activities. Also, it may be concluded, however, that an excessive fixation and stagnation in this stage is occurring, which might be associated with institutional inertias and cultural representations prevailing among the social actors.

Anyhow, the forward step or leap would require additional energy to overcome these obstacles and the source for such energy would have to be found. There are several potential sources: top management replacements bringing new concepts; consultancies, which spread models and tools, influence by universities, etc. Several approaches and models, however, which might have helped introduce changes – such as Quality Circles or various consultancies, for instance – have been assumed as "fashionable" trends, without sufficient depth, thus resulting ineffective for the development of organizational reflexivity and improvement.

Despite the aforementioned, reflexivity has been a significant component of the change processes occurring among Chilean companies over the last few years, but it has been **concentrated at top management levels**.

Workers' ideas and suggestions find a channeling path along the **hierarchical way**. Notwithstanding, in most cases the use of this path for these purposes is not effective. Ideas do not reach the level where they could be implemented; ideas are blocked, disregarded, not applied or not discussed. This goes along with **managers absent from the workplace**, which reinforces the verticality, distance and difficulty for dialogue and involvement.

The managerial discourse, confirmed by the interviews undertaken, is backed up by the legitimization of the current status quo. It argues that workers do not take the initiative; whenever they are given participation opportunities, they disregard them. This, however, is a typical systemic mechanism for reinforcing a cognitive scheme, which operates as a self-fulfilling prophecy. I do not trust in their participation skills → I do not provide them with participation instances → they do not learn and know how to participate → I do not trust them enough to let them participate (and it all starts over again). As they do not know how to participate, if they are given specific instances for them to, they will not know how to properly do it, which confirms the corporate manager's mental model, about the impossibility to trust on workers' participation. Hence, the circle is closed, and the social and cognitive pattern becomes solidified. Many managers seem to be still trapped in it.

This situation raises challenges regarding the way out of the above trap circuit, which generates stagnation. In order to do so, there are psychosocial procedures and tools, which have been applied for years now. Their introduction into Chilean companies, however, has been slow-paced. In spite of that, there are outstanding exemptions where the virtuous circle has occurred: trust on the workers' capabilities → systematic and well-designed participation opportunities → collective involvement and learning by the employees → positive effects for the firm and workers → reinforcement of the participation scheme.

No matter how the above evolves, it currently involves not fully gathering the contribution workers may make. It implies missing their accumulated experience and the knowledge deriving from their direct contact with work problems. So, this is not only a weakness factor for the worker's motivation and development, but it also poses an obstacle or limitation for the improvement and development of the firm as a whole.

Out of the aforementioned, we can conclude that the **reflexive participation**, which is one of the significant components of post-Fordist approaches, and also one of its virtuous elements, is being **only weakly and insufficiently integrated** in Chilean firms.

4.3. Normative and cultural order inside the firm

A significant aspect of the normative and cultural dimension is the **sense of equity** and how it is articulated within the firm. At a large extent, this is shaped around the reward system. Depending on how this system is constructed – discussed, communicated, negotiated, etc.– among the different actors in the firm, different meaning and valuation patterns result.

Data reveals a **widespread injustice sensation** regarding the reward system. Compensations do not reward worker's competences and experiences as they should, nor are fairly shared for similar tasks. Moreover, productivity improvements taking place, which are mediated by higher work requirement on workers, are not properly expressed in the compensations they receive.

On the other hand, the variable component of compensations has increased, but it keeps a reduced coverage. Collective bonuses are used the most, but they skip the specific match with individual and group efforts.

These perceptions and appraisals, prevailing among workers, are associated with the insufficient attention corporate officers pay to the design, negotiation and communication of the reward system, which partly results from their lack of knowledge about its implementation, and also from the resistance to change the traditional system.

All of the above operates as a weakening factor in the normative and cultural order of the firm. Rewards appear as linked to power criteria, subjected to the mere entrepreneurial and management discretion. They are not subject to an analytical and argumentative discussion, able to make them transparent, understandable and assumable as grounded.

In its turn, the perception of lack of equity as well as the lack of match between the rewards and competences has negative effects on the working satisfaction level, which harms the organizational climate and may affect the organization's performance.

Non-economic rewards, which have a huge potential to strengthen social relationships within the firm, and also have the advantage of not involving an economic cost, are, despite this, scarcely used.

The latter finally ratifies the image of a reward system that constitutes a weak area in Chilean firms and is not contributing to build collaborative and committed social relationships supported by equity, justice and recognition values.

On the other hand, the high percentage of workers who consider layoffs to be justified reflects some understanding of the corporate decisions, in relation to a highly sensitive issue. The development of communication tasks by entrepreneurs and corporate officers, seeking to explain the firm's situation and needs, may be assumed to be behind this. Although, the more general perception of economic crisis and unemployment also influences on it.

In any case, less than half the workers in these firms, which may be assumed to have better economic conditions that those in smaller companies, believe that the firm would try to avoid layoffs in a crisis situation. On the same path, a similar proportion believes that there is collaboration, trust, and sense of a common work

among the firm's members. In most companies, the situation is negative. Instrumental relationships with a material and economic interest straightforwardly appear.

Additionally, changes in the organization of work occurred in the recent years have **not** been undertaken with a collaborative approach. Likewise, instances for workers to express their opinion are restricted or show little effectiveness. Even worse, at a significant percentage of companies there is fear for reprisals or punishing measures against criticism or complaints by workers.

In the internal institutionalization of the firm, unions have been losing presence, coverage and strength. Their contribution is focused on the economic claims, and is, above all, reactive. Their role in the firm's institutional construction is, in most cases, almost irrelevant. Although there are those who have expected a labor union renovation for years, along with their significance recovery, it would not be taking place for the moment and the space they leave behind remains vacant.

Considering the situation described above as a whole – the difficulties in the development of reflexive participation, slow implementation of decentralization at the workers' level, weaknesses in the construction of normative and cultural order, the problems with the sense of justice, etc. – it may be argued, along with the supporting empirical data, that **the democratization inside the companies is a mostly incomplete and pending process.**

CHAPTER VII.
CONCLUSIONS

In this final chapter, we will seek to describe the gestalt emerging from the plurality of changes evidenced in the Chilean firms, outlining the most striking features. There are several questions guiding us: Are we facing a new configuration of the firms of this country? Are post-Fordist innovations prevailing? What are the main development trends we can discern? Can we argue that a new kind of firm has emerged? What, if any, are the new elements developed and what are those remaining from the past? And finally, from the workers' perspective, are these changes positive or negative?

Insofar as organizing and synthetically characterizing firms' changes, we will again take into account the post-Fordist's core dimensions outlined in chapter one: strategic adaptability, flexibility, inter-organization networks, development and intensive use of human potentialities, organizational reflexivity and use of ICT. We will summarize some of our main results regarding each dimension, trying to specify the peculiarities of Chilean firms. Afterwards, we will deal with the question of the effects of firms' changes on workers and, finally, we will offer our conclusions about the total configuration.

In the comparisons we make, we draw a contrast between the current situation and the Import Substitution Industrialization (ISI) period under the Compromise State, which is, roughly, the Chilean equivalent to the Fordist period. Therefore, all subsequent references to "previous period" will refer to the former (ISI) period in Chile's history.

1. Strategic adaptability

Chilean firms have experienced enormous transformations in relation to the environment, especially in regard to coping with the new socioeconomic and cultural conditions. In entrepreneurs and managers, there exists a marked **strategic awareness** that has been intensified by economic crises, incessant competitive amplification, and the very salient threat of failure affecting nearby firms resulting from poor decisions in the adapting process.

As such, members of the strategic apex have adopted cognitive schemes in which they observe the firm "from the outside in", in the perspective of adaptation to the environment, and thereby shifting the functional emphasis to commercialization.

This way of organizational self-observation, with its decision-making oriented in reference to the **external focus** and emphasizing sales and the relationship with clients, departs substantially from the methods of self-observation prevalent in Chilean firms in the ISI period prior up to 1974. First, in the previous period there is nothing resembling the firms' current strategic dynamism and continuous environmental scanning. Second, previously, in a typical Fordist way, production (or service elaboration) was the dominant function, commercialization being subordinated to it - a situation which now is completely reversed. And, third, in the previous period, a crucial environmental element influencing firms' actions was the State - an important part of the firms' search for profitability occurred through influencing State decisions and regulations. At present, this aspect has lost pre-eminence in the relationship of the firms with their environment. It is a feature of the previous period that has experienced a great transformation, occurring concomitantly with the significant autonomization of the economic system from the political system. In the 1980s and 90s, the government drastically restricted its actions and reduced its size, transforming itself into a

"Subsidiary State", which, nevertheless, continues fulfilling an important regulatory function.

This outward-directed view focused on commercialization has brought about a growing **orientation towards the global market and towards the internationalization** of firms, escaping the restrictions of the domestic market. This internationalization is not only manifested in increasing exports, but also in the firms' structural extension, e.g., establishing branches, productive chains and alliances throughout the world. Through such actions, Chilean firms reveal some very post-Fordist features - flexibility, organizational adaptability and global mentality. However, the international expansion has been predominantly directed to the neighboring countries or other relatively near Latin American countries, with similar sociocultural traits. That is to say, traits of similarity and nearness have been predominantly preferred; thus, the firms are still far-removed from cognitive and operating patterns decidedly global and without territorial anchors that could be categorized as typically post-Fordist.

This attention to the environment and the subsequent strategic reframing and redefinition have multiple internal repercussions; they influence several organizational changes: the development of a greater structural differentiation, generating new roles and departments specialized in approaching specific environmental areas; the redesign of internal processes; the structural lightening of the firm; the adoption of new information and communication technologies; and the design of communication mechanisms connecting with clients; among others.

But perhaps the most outstanding derivations have to do with "external" aspects: changes in ownership bonds, outsourcing, productive linkages, strategic alliances, internationalization, etc. As part of this, mainly in the largest firms, but also in many of the medium-sized firms, the interweaving of local with foreign corporations and capital is significantly increasing. This trend has intensified

greatly during the last decade and, as a result of the last years' crises, it may be expected that the international growth of Chilean firms, in the coming years, may rely on these foreign connections much more than before.

2. Flexibity

Chilean firms have adopted several methods to flexibilize their organizational functioning. Based on a review of the empirical results, we can distinguish five kinds of flexibility developed by firms; they are: (1) flexibility in external connections, (2) in technical procedures, (3) in internal organization, (4) in employment contracts, and (5) in compensations.

Flexibility in external connections

Strongly related to strategic reorientation, **ownership connections have been flexibilized**, acquiring an outstanding dynamism expressed in a profusion of mergers, acquisitions, and stock adjustments. These actions allow a firm to obtain, in a very accelerated way, substantial transformations of its productive capacity, territorial extension, and product and service variety.

Other manifestations of external flexibility that have been broadly diffused are the **outsourcing practices** and the subsequent deployment of **subcontracting networks**, no longer controlled hierarchically, which can be eliminated or added according to market requirements and other contingencies.

Still with smaller diffusion, but showing high potentiality, **strategic alliances and joint ventures** have begun to be adopted by Chilean firms. They are powerful means to add capacities and resources to the firm, creating flexible and adaptive organizational networks, able to be shaped according to the judgments of entrepreneurs and managers with respect to the environment and to the

strategic orientations they define. The effectiveness of these practices allows foreseeing the likelihood that soon, by mimetic influences, they can be extended to a larger number of firms in the country.

These firms' adaptations change the organizational boundaries and incorporate, as part of the functioning and coordination of the firm, an intermingling of hierarchical and market criteria and mechanisms. The market emerges, in this way, inside the organization itself, and is used for achieving better adaptation.

Technical flexibility

The incorporation, already widespread, of computerized machinery and equipment to the manufacturing processes suggests the arrival of informatization to the old Fordist tecnological core, and the beginning of the transformation of this core. The use of computerization in production processes introduces the possibility of obtainin a higher productive versatility - insofar as for volume and variety of products - and, on the other hand, it allows for better control and a more efficient integration with other organizational processes, facilitating global reviewing and improvement. In the services sector, on the other hand, the application of computer technology to processes such as product supply and distribution allows for important improvements in velocity and adaptability.

Flexibility in the internal organization

The main expression of flexibility adopted by Chilean firms is the workers' **polyvalence**, with the associated adjustments in rotation and, in some cases, layout redesign. Polyvalence, as we have seen, is a practice that is very persistent and is one of the factors that facilitates firms' carrying out their operations with adjusted staffs, without losing effectiveness. Polyvalent workers can better absorb the effects of variations in demand and other circumstances

affecting firms. Together with the contingent personnel, polyvalence constitute a dynamic (human) substitute to the typical buffers of the Fordist firm.

On the other hand, however, the introduction of polyvalence often involves a job losing its contours and becoming diffuse and changing. This is one of the repercussions that the organizational changes have on the workers' daily experiences, incorporating new cultural meanings into them, which progressively move away from those that prevailed in the previous period.

The Just-in-time procedures, allowing reduction in stocks and the ability to operate internally amidst continuous adjustments in demand flow, constitute, on the one hand, a pressure to make processes more efficient - the JIT is an uncertainty- generator, eliminating the protective resources in excess. On the other hand it can be seen as a means of flexibility. Anyway, in the Chilean firms, what has been adopted is the general logic of the JIT, more than the specific systematic procedures.

Flexibility in employment contracts

Contractual flexibility involves diverse transformations that have altered the employment relationship into a weaker bond. At present, the relationship between firms and workers is more temporary and contingent. This transformation has been associated with a general weakening of labor regulations in the country that occurred during last decades. The increasing incorporation of temporary workers implies that an important part of the firm's staff becomes a contingent resource that is utilized according to the requirements of circumstance.

Another aspect of contractual flexibility is the variation in the duration of the workday. Regarding this, what seems to prevail is the extension of working

hours, which is not completely regulated (Aylwin & Durán, 2000). At the time of this research, a bill that would address this issue is being prepared. In reference to such a project, the managerial sectors, through their associations, leaders and publications, have incessantly insisted in the necessity of introducing greater flexibility in the workday. Everything seems to indicate that this project will be approved, as it has important support from the political body.

In sum, Chilean firms, whether through layoffs, or through the use of temporary and contingent workers, have developed mechanisms for internal flexibility, and have used them thoroughly.

Flexibility in compensations

The introduction of variability in remuneration is a method of flexibility, aimed at guiding the labor efforts more clearly toward the firm's goals. In this matter, Chilean firms have carried out rapid advances. However, this is a practice that does not reach more than half of the workers and that has diverse weaknesses in its implementation process. Some of such weaknesses are prevailing collective incentives, which are not adequately discriminating; the clear absence of incentives associated to quality goals; and problems existing in performance measurement and evaluation, and in the systems of feedback of results.

This is yet another divergence from Fordist rigidity. Rewards are no longer tied to job performance, but rather have become contingent upon results. This change, similar to polyvalence and contractual flexibility, affects the employees directly, and the fundamental parameters of workers' cognitive reference become vaporous, malleable, and more dependent from actions of workers themselves; thus, it could be claimed that the worker becomes a more active actor, more able to effect change in his or her destiny in the firm. However, at the same time, the unpredictability of work variations, wages and employment relationship,

constitute a constant threat to workers' ability to achieve the minimum results for maintaining their standard of living.

All these different means of achieving flexibility are widely employed in the Chilean firms in a growing tendency to modify the old Fordist stabilities. They also generate aggregated and interactive effects within the firm. On the one hand, the global organization becomes more malleable, more adaptive when faced with the continuous environmental dynamism. On the other hand, the worker finds himself in a new organizational context in which the job, the contractual relationship and compensations are flexibilized. This represents a very substantial change from the relative stability of the past, towards the constant fluctuation in key elements of the organizational life. In the psychological dimension, this involves an uncertainty that, for a certain types of workers, can constitute a challenge; but, for others, can represent a tension difficult to manage.

3. Inter-organizational networks

In the last two decades, inter-organizational networks have experimented a significant growth, being developed kinds of networks in the previous period, if they existed at all, were not important. During the ISI period, the main networks were those connected with the State: networks with high centralization and interweaving the economic with the political system. In the current period, a new web of inter-organizational linkages has taken shape that, nevertheless, has certain peculiarities marked by the institutional and cultural features of the past.

The networks, clearly stronger and more developed, are those based on ownership connections, and are the most intensively utilized. While business groups and holdings have been articulating themselves in more complex and extensive networks, medium firms, as we have seen from our data, are also

developing mini-networks, based on ownership relationships, although obviously in smaller scale, possibly influenced by mimetic processes.

While subcontracting networks have grown, along with vendor relationships, however in most of the cases, they are networks with weak ties, and with very minimal developments in organizational learning, knowledge management and innovation. These are networks in which market approaches prevail and which include coercive components. In such a way, they tend to constitute verticalist and pyramidal relationships. An absence of a tradition of more horizontal relationships and the prevalence of a cultural atmosphere of distrust is in the background. Historically, a cultural and normative framework of shared expectations and reciprocal trust have not been developed to give support to the constitution of such relationships of collaboration. The centralist tradition, on the other hand, habitualized a particular type of concentric networks, focused on the government. Currently that kind of network is not the more adequate, neither does the government have the power to articulate networks such as it could have had in the past. Additionally, the problems for developing trust and collaboration might have deeper roots, as is proposed by some authors in the Catholic and Hispanic cultural background, not favorable to the development of autonomy and associativeness among strangers.

In the same perspective, there are big "structural holes" in the connections between firms, research centers and universities. Multiple connections could exist, contributing to technological development, the creation of new products, and innovations in process, but these relationships are not in evidence. The few networks such as this that have been created have resulted from State initiatives and support. This particular lack of connection is a very important restriction, not only for firms' development, but also for the management of innovation at the country level.

Only in the last 10 years have firms begun to develop strategic alliances, joint ventures and franchises, which are fundamentally horizontal, collaborative relationships. In spite of the newness of these practices, they have shown to be effective and are in a process of accelerated growth. Unlike connections with vendors and subcontractors, these bonds are stronger, having a tendency to strengthen ties. This may be due to the fact that these involve a more egalitarian power balance, contributing to reducing the risks of opportunism, and to the high reciprocal benefits derived from the relationship. In subcontracting and vendor networks, on the other hand, there are often great differences of power and resources, and the focal companies tend to consider the relationship basically in term of economic benefits, in such way that the dependent companies are viewed as replaceable elements, easily changed if another cheaper alternative is discovered.

The development of these collaborative relationships, such as the strategic alliances, however, is advancing more quickly in the firms' practice than in the managerial discourse. Furthermore, in some cases there is still no clear identification and awareness regarding their logic and strategic role. Only in the business groups and holdings' corporate centers, especially those with more international connections, is such an awareness clearly present.

4. Intensive use of human capacities and development of collaborative relations

This is arguably the dimension of the post-Fordist paradigm with the greatest variability worldwide, relying more heavily on institutional and cultural factors than other dimensions. In the particular case of Chile, this is a weak, scarcely developed aspect, which has repercussions in other dimensions.

Profiting from and promoting the competences of organization members has no significant place in corporate strategy, allocation of resources or daily practices. In corporate strategy, in most cases, human resources are relegated to a subordinated position; neither is members' technical participation assigned a major role or regarded as decisive means of leverage for firm development, even though the managerial discourse claims the contrary.

Nevertheless, the autonomy of firm members has increased, although at a slow pace and heavily confined; and is dramatically less pronounced the decision making power provided in case of initiative development or activity reorganization. In addition, decision-making remains strongly concentrated in mid-rank levels, where supervisors remain the relevant authority. In this sense, decentralization has been limited, spreading only to mid-levels of the hierarchy. On the other hand, control is boosted and computer surveillance gains momentum as autonomy gradually progresses.

Although past authoritarian patterns are considerably reduced, and the quest for disciplining is no longer as dominant a factor, verticalist and, often, paternalistic relations still prevail within the corporate world. Alternatively, horizontal relations and bi-directional communications remain a scattered practice.

The constitution and use of teams at the managerial and professional level is a consolidated trend. In the remainder of the organization, however, such practice is employed only in the discourse, having no actual collaborative effectiveness. This same situation also occurs regarding the application of information technology to communications and internal collaboration processes. Virtual teams and interaction among hierarchical levels along with the development of collective interactivity are still marginal.

Training is a critical factor in boosting the members' contributions within the organization, both through addressing technical matters as well as the psychosocial aspects that facilitate participation and implementation of "humanware." Nevertheless, even though firms have increased coverage over the last decade, with the significant governmental financial support, the activities developed lack sufficient systematicity, depth and connection with the corporate strategy. Accordingly, training is not adequately preparing employees to foster corporate reflexivity and learning within firms.

The above influences on the prevalence, within Chilean firms, of the typically Fordist separation between conceptual (or intellectual) activity and operating activity, the former being concentrated within the top-management and professional echelons and remaining apart from the operating core members. Likewise, within firms and as part of modernization efforts, an effective process of **communicative rationalization**, of argumentative articulation, where organization members are involved and perform integral roles within the firm, has not taken place.

Consequently, the change and progress that has occurred are insufficient to cause a qualitative, socio-cultural transformation resulting in effective incorporation of workers. Managers and workers' mental models and values regarding participation and workers' contributions do not show major change from the previously prevailing modes. Distance between managers and workers remains a key issue as the enduring distrust crystallized along extensive periods of intense social conflict, repression and authoritarian power has not been overcome. It might be anticipated that conditions fostering change had been gathering and, as a matter of fact, this research has shown that various positive progress has been achieved; however, for radical change to actually occur, as in the case of a minority group of firms where significant transformation has actually occurred, further efforts are necessary.

Such a momentum, in the cases studied, has basically resulted from (1) owners or managers particularly convinced of the worth of workers' participation, who have been able to move the entire top management group towards that direction of major participation of the personnel, and (2) headquarters influence, in case of foreign multinational firms, relying on corporate culture, organizational experience and managers prepared and committed to that perspective. These are factors that facilitate overcoming the cultural and institutional inertia, which acts as a deterrent in most local companies. These factors prove effective as, driven by their own momentum, a systematic process encouraging training and involvement, reflexive performance and members' autonomy develops; and insofar as other corporate systems - communications, compensations, evaluation, etc. - become aligned with those changes. As long as such processes occur, traditional perceptions and valuations will gradually change.

Given the relatively special nature of those factors, one might think that – in this matter - changes will remain inexorably slow and so the substantive incorporation of workers' experiences and potentialities to corporate improvement will remain lagging and weak within the corporate transformation process. This situation will persist, unless other driving forces or special contingencies arise, which are yet to be discovered.

It should be highlighted that this is a particularly weak aspect. Much of the Fordist-Taylorist imprint still remains. The years of social polarization and conflict, as well as the extensive dictatorship, seem to have caused deep scars in the collective memory. Distrust, fear and distance, in spite of the years of democratic government (since 1990), have not been eliminated or sufficiently mitigated. Overall, this situation results in little substantial participation and involvement of workers in post-Fordist changes, which causes imbalance in the general structure of changes.

5. Organizational reflexivity

Regarding reflexivity, Chilean firms have developed a reflexivity **concentrated on the upper levels of the organization**. Global programs of change - as TQM, OD, etc. - that could have extended such reflexivity toward a wider group of the company's members, have been adopted in ways in general partial, punctual, with low systematicity, and with a participation predominantly of executives and professionals. Only a reduced group of workers has been involved, in some degree, in collective practices of organizational reflexivity and improvement. This implies that a good part of the experience accumulated by workers and their tacit knowledge has not been used fruitfully by the company for its development.

In such a sense, the prevailing conventional conception of the company in which the normal processes are privileged continues. A structure and methodical process whose function is to revise the normal activities, developing reflexive processes and the derivative learnings of double loop, fail to take form. In this aspect, except for a small group of companies - not more than 20% of them - the Chilean organizations have advanced very little; they are noticeably lagging behind of the countries of advanced capitalism.

In the same way, certain feedback practices that contain reflexive potential, and that can be developed relatively disconnected from more general programs, are seldom applied and with weaknesses in procedures. This is what happens, for example, with the feedback of climate studies, or with the feedback of individual performance evaluations.

The biggest developments in organizational reflexivity have occurred in connection with activities of strategic planning and environmental scanning – the latter, associated, for instance, to benchmarking or to studies on competition.

In turn, neither the ICTs that possess big potentialities for knowledge management, whether internally in the firms or in the external networks, have been utilized, in a significant way. ICT use is still very concentrated on data storage and processing, and on information handling. The digital management of organizational knowledge that can be registered and processed electronically, the creation of electronic spaces allowing workers interaction, the development of experiences on line, and the creation of knowledge, are aspects of a field still very scarcely explored by the Chilean firms.

Therefore, this is a dimension that has had a partial and unbalanced development, similar to what has occurred with regard to the development and use of the personnel's potentialities. In fact, both weaknesses reinforce each other, in a negative and very solidified circuit.

6. Organizational use of ICT

During recent years, especially since the beginning of the 90s, the Chilean companies have experienced an important informatization process that has reached all activity areas, from production to the external connections. The uses with the most organizational repercussions have been those within management, which also, through standardized packages, contribute to the international homogenization of practices. A significant development of digital connectivity (among organizations) also exists within external connections that, along with all the other uses of ICT, puts Chile in an advanced position in Latin America and shortens the gap between Chile and the advanced capitalist countries.

The greatest use of ICTs for external connections, however, happens within networks of firms articulated by ownership bonds: multinationals, holdings,

business groups (big or small). This technology reinforces such networks, while in others – such as the subcontracting networks - this employment is still limited.

With regard to inter-organizational connections, the Government has developed a conspicuous role, multiplying on-line government services, and creating electronic commercial spaces to coordinate and negotiate with State suppliers. The government has deliberately assumed the function of promoting and stimulating firms' digitalization, seeing in it potentialities for the country's competitive advantage. Through this, the State contributes to offset the sociocultural inertias that block or slow the development of connections and the establishment of collaborative relationships among firms.

As stated above, the use of ICT has been, however, particularly weak for the creation of spaces for communicative interactivity and for the development of reflexivity and organizational learning.

7. Effects of changes on workers

The previous points evidence that workers have failed to be greatly incorporated to reflexivity and organizational learning processes leading to work and corporate improvement. In line with this, workers' main demand for change is to make more extensive use of their knowledge and receive further training. Consequently, the post-Fordist configuration that begins to take shape within Chilean firms has a distinctive **lack of active participation of workers**; their role is minimized and bears closer resemblance to the Fordist model. This results in overall corporate weakness and, at the same time, constitutes a hurdle for work and human development of employees.

On the other hand, work organization has been gradually enhanced: the work itself has gained variety and autonomy, and training, among other aspects, has

been increased. This is a positive and promising change that seems to lead into a trend, albeit a slow one. In any event, it should be kept in mind that we are dealing with medium-sized and large firms' regular workers, that is to say, a segment of workers relatively privileged within the domestic economy. Labor conditions of temporary workers or, of small-sized firms or informal sector workers are much less advantageous. Even in this privileged group of formal workers, roughly one third or one fourth of them has traits of a **substantive precariousness**, in the work itself: they perform a tedious, monotonous job, lacking autonomy, having no opportunities to use their knowledge and interact with co-workers.

A general situation among workers is that the organizational changes implemented by firms have resulted in an **intensified work pace**: work is faster, involves a larger number of tasks, and more responsibilities, etc.

On the other hand, the contractual relationship with the firm has lost strength and, in many cases, workers see their jobs as subject to market forces. Moreover, attaining the adequate compensation level to keep up with the standard of living, forces them to undertake an ongoing struggle, where results are not always foreseeable due to the strong burden of the variability component. The aforementioned has resulted in introduction of significant **uncertainty** to work life.

Such a situation – work intensification, uncertainty, substantive precariousness of work - has had a negative **impact on the health** of a significant segment of workers. Almost two thirds of them show some psychosomatic work-related condition and roughly one third experience a number of accumulative health problems viewed as risky and worrisome, which clearly involve deterioration of their quality of life.

This situation has occurred hand in hand with decayed corporate socio-moral environment. Work overload, higher risks for workers – the risk of insufficient incomes or job loss - have not been accompanied by consistently higher compensations. All in all, this has caused a general sense of **inequity** and internal injustice. Accordingly, a large percentage of workers believe that compensations are neither representative of their individual contributions nor of the productivity improvements achieved within the firm. In general, it may be concluded that workers are not being sufficiently incorporated into the benefits obtained by the firm based on their contribution. This is what workers perceive and also what is evidenced by objective indicators. For example, in the 1990-2000 period, while productivity rose by 4.3%, actual compensations were only increased by 3.2% (Fazio, 2001: 226).[120]

Seemingly, this situation is part of a larger problem: lack of collaborative relations between managers and workers, inexistence or weakness of corporate cultures effectively appraising collaboration and participation, and pervasiveness of cognitive and value patterns reproducing the social distance. A famous research by Hofstede (1990) that compared corporate cultures in 64 countries showed that Chile, just as other Latin American countries, experienced high "power distance", while the opposite situation occurred among Anglo-Saxon and Northern European nations. Power distance accounts for the cultural acceptance, within the firm, of an uneven power distribution within the corporation. Such survey specifically evidenced the prevailing situation in the 70s. However, after the long dictatorship (1973-1989), this situation does not seem to have experienced major changes. On the contrary, it became accentuated during this period and now, over ten years of democratic government, a gradual change is only beginning to occur.

[120] Based on data by Centro Nacional de la Productividad (*National Productivity Center*) and INE (*National Statistics Bureau*).

On the other hand, it may well be assumed that this internal state of affairs in firms is intermingled with the situation of society as a whole. On a global scale, Chile appears as one of the countries with the **greatest socioeconomic inequality**, and one of the most regressive in terms of income distribution. A couple of indicators illustrate this situation. Considering the Gini index, which measures the degree of inequality in the distribution of family income in a country, Chile is at a Gini of 57 (2000), ranking eighth in terms of inequality among 109 nations from all over the world. The country with the greatest inequality index is Sierra Leone, with 63 points (CIA, 2002).[121] If we consider the percentage of the national income obtained by the richest and poorest sectors, we can see that, on the one hand, the **upper 10%** gets 41% of the income, and the **upper 20%** gets 61%, which places Chile in the ninth and seventh places, respectively, when compared with 115 nations.[122] At the other end, the **lowest 10%** get 1.3%, while the **lowest 20%** gets 3.3%. If compared with the situation in 115 nations, Chile occupies positions 98 and 108, respectively, that is, among the worst performing countries in terms of participation of the poorest sectors (World Bank, 2002). In other words, Chile is among those nations where the rich get more and the poor get less. It is among the 10 or 20 countries with greatest inequality in the world.

These figures, which evidence extreme inequality at the international level, are worth noting. This situation is not reflected in the self-observation or reflexivity the Chilean society makes about itself. It seems to be a blind spot. In Chile, there is the insistence on the prevalence of some blurred "middle social sectors", with which most of the population identifies. Yet there is increasing empirical evidence indicating wealth concentration and, over the last couple of decades, its

[121] World average of the Gini coefficient towards the end of the 1990s was approximately 39. We had previously compared it with the rest of Latin America: during the 90s, Chilean inequality rose more than in the rest of the region.

[122] The greatest concentration of income in the upper social sectors can be found in countries like the Central African Republic and South Africa, where the upper 20% gets 65% of the national income.

shameless ostentation has been on the rise. Firms internal dynamics are one of the mechanisms that contribute to such inequality; and the there are no signs of procedures that may help correct this situation being initiated inside firms.

All of this may be related to the **verticalism** often mentioned throughout this research, the **internal separation** between managers and workers, the perceptions of **inequity**, **mistrust**, and **difficulty establishing collaborative relationships**. However, the relation between these factors and and the inequality at society-level is only hypothetical. But the consistency between such characteristics, both internal and external, is meaningful.

One of the factors that has contributed to the preservation of inequality has been the workers' great **union weakness**. The intense repression experienced during the military regime seriously undermined the unions' organization and presence in the different firms. And their recovery under the democratic administrations has only been partial. Many entrepreneurs create unfavorable conditions for their development, there are still fears associated with unionization, and the many years of organizational annulment exerted on them destroyed a major portion of the accumulated tradition and experience. On the other hand, union leaders under such conditions, who have numerous specific demands to resolve, have found themselves unable to introduce the necessary organizational and cultural changes to obtain the legitimacy and adaptability required by the new prevailing conditions within the firm itself and society. Thus, although one might expect unions to be the element supposedly exerting pressure towards greater equity and internal participation in firms, their role is not likely to change in the near future, nor is their effectiveness in these matters likely to increase.

In conclusion, it may be stated that the post-Fordism being articulated in Chile **is leaving workers behind** – in terms of substantial integration and distribution of the benefits. And this is true despite the fact that, in several matters related to

the job itself and work conditions, the workers' situation has improved and they, notwithstanding, appear to be in a state of conformity. Although this form of development may escape workers' active opposition, it does represent a risk for future configurations the firms assume within the logic of the post-Fordist paradigm; it is a risk for the workers, as well as risk for the firm and for society.

The data collected partly confirm our initial hypothesis in the sense that the different organizational changes may have been applied following a selective criteria that would affect workers negatively; but make it necessary to introduce certain modifications. In addition to several negative effects – such as work intensification and health deterioration -, the organizational changes have also had various positive results – for example in terms of greater work autonomy and variety -, and other effects that have both positive and negative aspects, such as greater wage variability. However, the most important aspect is what we have stated previously in this paper: that there has been little substantive incorporation of the workers into the process of change and a weak development of change based on the workers' knowledge and experience.

8. Tendencies of cultural post-modernization

As a subproduct of our attention to the research's main focuses, we have encountered diverse cultural repercussions of the organizational changes that are noteworthy. The transformations that are taking place inside the firms are contributing to the development of diverse cultural features that have affinities with a **"post-modern" sensibility**. In this matter, however, caution is necessary. What we maintain is that certain processes are contributing to changing the managers and workers' perceptions of reality, forcing them to adopt an orientation that begins to harmonize with some of the features of a sociocultural transformation that can be called **"post-modernization"**. We are not, in any event, referring to the radical or totalizing approaches of post-modernism, but to

those approaches that indicate a correspondence with a certain cultural inflection inside the capitalist development, representing an intensification of sociocultural characteristics, that are not strictly new (Harvey, 1990). From this perspective, post-modernism can be viewed as a new sensibility emerging slowly in the West's capitalist societies, and that is superimposed with modernist orientations. In such a sense, the conceptualizations on "modernism" and "post-modernism" apprehend abstractly two cultural constellations constituted in the same dynamics, and part of the same process, with continuities as well as differences. As Harvey states (1990: 339, 342), such categories constitute "static reifications imposed upon the fluid interpenetration of dynamic oppositions" that operate inside the capitalism as a whole.

The period of ISI, with its tariff protection and multiple market regulations, provided firms with a relatively stable and predictable socioeconomic framework, which, in turn, affected organizational and work experience, and influenced the cultural meaning of identities and social actions. The last decades, on the other hand, have completely altered this context, having the result of firms responding with the diversity of measures that we have outlined here. Such measures have been generating important transformations in the experience within companies, making this experience gradually become one with different cultural connotations. Work has become more fluid and contingent, the delimitation of jobs and the demarcation of organizational frontiers have become more indefinite and more malleable. Central concepts such as “quality” incorporate in themselves the cognitive perspectives of the social actors. The bonds with the organization, the compensations, the future, have all become uncertain. In this way, the “life world” in the social space within the firm has been transformed and can be discerned, in several of these changes, as having postmodern connotations and sharing similarities with some of the postmodern cultural orientations.

However, it remains doubtless that the Chilean firm is far from approximating a postmodern experience. What we affirm here is, only, that inside the firm we find evidence of several post-modernizing processes, which are slowly altering the old Fordist certainties and the old way of life inside firms, for both managers and workers.[123]

Finally, it is necessary to highlight that the cultural transformations taking place in the companies impose upon workers a strong sense of **uncertainty** and that the abandoned Fordist stabilities and securities have not been replaced by an effectively dynamic, reflexive and creative role for workers in the organization. Hence, it is important to address the question of whether workers' experience has a authentic post-modernist orientation, or whether it merely involves **cultural precariousness**.

9. Resulting configuration

We can now attempt to provide the answers to the most global questions of this research. Are we in the presence of a new configuration in Chilean firms? Can we even speak of "a new Chilean firm"? What new elements have been introduced, and which remain from the past?

If we contrast present-day firms with those from the import-substitution industrialization period under a Compromise State, today's firms display characteristics that are substantially different. The firms are now more aware of the environment; the focus on the environment's political dimension as a means to obtain greater profitability has been abandoned; there is increased attention on productivity and efficiency; and, human resource management is not centered on

[123] The ICT, on the other hand, in their use for communication, are capable to provide digital spaces for social interaction and experience, presenting a high post-modernizing potential (Ramos, 2002; Turkle, 1995). This side of the ICT, however, in the Chilean firms, have very little expression and relevance, yet, as we have seen, and its future use is uncertain.

disciplinary action. During the period from the 1970s to the1990s, there has been a succession and accumulation of changes taking place in the social institutions and socioeconomic contexts, to which the firms have gradually adjusted and adapted. Thus, just as we can say that nowadays there is a "new type of entrepreneur" – as suggested by Montero (1997) with solid empirical evidence -, we can also safely say that now there is a new type of firm. Of course, this does not imply that all firms (medium and large) correspond to this new type. Nevertheless, on the whole, the prominent features and the overall profile are different from those of the previous period.

Considering the strategic malleability, global perspective, diverse forms of flexibility, the structuring of inter-firm networks and the growing use of ICTs that we have found in Chilean firms, the resulting entity is notably different from the previous one. This difference is analogous to the difference between using a typewriter and a word-processing software on a computer capable of connecting to the Internet. While these two instruments share similar purposes (to write), and certain functional similarities, the conventional typewriter has restricted possibilities because of its mechanical structure, whereas the computer has enormous potential, allowing it to transform writing formats, apply spelling corrections, improve vocabulary by means of built-in dictionaries, e-mail the resulting text, etc., etc.

This same image, however, makes us realize that, in the case of firms, the change is not complete; there is not such a radical substitution of the previously constituting elements. Some are reconfigured, and others are maintained with minor changes. In fact, the current firm configuration still carries elements from the past, some of which have limited the development of some post-Fordist features.

In terms of internal social relations, in particular, verticalist relations with significant power differentials still prevail, characterized by a high degree of mistrust and social distance between managers and workers. This has constituted a barrier to workers' progress in technical participation, to the greater use and development of their knowledge, and to the extension of organizational reflexivity, which has only scarcely spread within the organizations' operating core. Along the same lines, human resources and training management still have insufficient and weak practical value and design.

It is precisely in view of these remnants from the past – especially the reduced attention and development of the firm's "human capital" - that some authors believe that, in the case of Chile, there has been **no** effective paradigmatic change. This lack of change is evident and also very relevant. Notwithstanding, if the different post-Fordist dimensions are taken as a whole, we can see that in many of them there are significant changes compared with the situation three decades ago.

The consequence of these remnants and poorly developed areas is a **markedly misbalanced** configuration. There are deep and significant changes in some dimensions but not in others, and, in turn, the dimensions showing fewer advances refer to strongly interrelated aspects – operating core reflexivity, technical participation, human resources management, use of ICTs for knowledge management and development - that feed each other in a negative circuit, thereby consolidating their inertia. This **negative articulation**, this sum of weaknesses, also has deep sociocultural and institutional roots that make it very resistant to change.

On the other hand, and also as an institutional heritage of the past, the **State** still plays a relevant role, boosting certain types of development – especially in terms of training, building innovation inter-firm networks, and extending and deepening

the use of ICTs -, seeking to protect work conditions – through the legislation and the controlling action of the Labor Bureau - and facilitating union organization. Thus, the State is trying to strengthen the weaker aspects of the prevailing organizational configuration and to attenuate the negative aspects. Given the magnitude of the weaknesses and the importance of deficiently developed areas, such action appears to be, now and in the future, very necessary for a more harmonious development of the firm and society.

Within the configuration thus shaped, ownership networks occupy a central place; these are the networks that, to the greatest extent, are taking advantage of their potential as such. Additionally, these networks are undergoing an increasing process of intertwining with multinationals and foreign capital, which is becoming another outstanding feature of the organizational tendencies in Chile.

In sum, Chilean firms display an organizational configuration that has assimilated some important post-Fordist features but not others, constituting a misbalanced pattern in which the workers play a very minor role. This configuration shows sufficient adaptability to the socioeconomic conditions; but one of its columns – the one that refers to technical participation and workers' reflexivity - is extremely weak and this – in addition to limiting the development of the different members of the organization - forebodes future problems and distortions for the firms, and should be considered to be a factor that contributes to the reproduction of social inequality in the country.

ANNEX

BASIC ANTECEDENTS OF FIRMS IN THE SAMPLE

NAME	INDUSTRIAL SECTOR	SIZE (number of employees, approx.)	YEAR OF FOUNDING	OWNERSHIP
MM1	Manufacturing – Machinery	70	1957	Domestic
ML2	Manufacturing – Foods	650	1970	Domestic
ML3	Manufacturing – Foods	900	1900	Domestic - holding
ML4	Manufacturing – Machinery	340	1978	Domestic - holding
MM5	Manufacturing – Machinery	160	1989	Domestic
MM6	Manufacturing – Machinery	180	1970	Domestic
ML7	Manufacturing – Machinery	1200	1905	Domestic - holding
MM8	Manufacturing – Machinery	120	1970	Domestic
ML9	Manufacturing – Foods	400	1960	Domestic - holding
ML10	Manufacturing – Foods	300	1995	Foreign - multinational
ML11	Manufacturing – Machinery	280	1955	Foreign - multinational
MM12	Manufacturing – Machinery	160	1951	Domestic
MM13	Manufacturing – Foods	140	1995	Domestic
MM14	Manufacturing – Machinery	79	1970	Domestic
MM15	Manufacturing – Foods	85	1916	Domestic - holding
ML16	Manufacturing – Machinery	280	1982	Domestic
MM17	Manufacturing – Machinery	183	1983	Domestic - holding
ML18	Manufacturing – Machinery	340	1945	Domestic
SL19	Trade	6.000	1900	Domestic
SL20	Financial services	7.000	1978	Foreign - multinational

BASIC ANTECEDENTS OF FIRMS IN THE SAMPLE (continuation)

NAME	INDUSTRIAL SECTOR	SIZE (number of employees, approx.)	YEAR OF FOUNDING	OWNERSHIP
SL21	Telecommunica-tions	1.300	1991	Foreign - multinational
SM22	Business services	78	1995	Foreign - multinational
SM23	Trade	140	1965	Domestic
SM24	Trade	85	1977	Domestic
SL25	Trade	20.000	1985	Domestic - holding
SM26	Trade	70	1939	Domestic - holding
SL27	Trade	7.300	1976	Foreign - multinational
SM28	Trade	95	1987	Foreign - multinational
SM29	Trade	145	1982	Domestic
SL30	Business services	300	1971	Domestic - holding
SL31	Telecommunica-tions	300	1994	Domestic - holding
SM32	Business services	55	1994	Domestic

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